Hanford Site Waste Management Units Report

Prepared for the U.S. Department of Energy Assistant Secretary for Environmental Management



Project Hanford Management Contractor for the U.S. Department of Energy under Contract DE-AC06-96RL13200

Hanford Site Waste Management Units Report

J.P. Shearer, Fluor Hanford, Inc.

January 2004

Prepared for the U.S. Department of Energy Assistant Secretary for Environmental Management



Project Hanford Management Contractor for the U.S. Department of Energy under Contract DE-AC06-96RL13200

Chris Will	lingham)	1/19/04
Clearance Approval	D:	ate

N/A

Release Approval (stamp)

Approved for Public Release

(Upon receipt of Clearance approval)
Further Dissemination Unlimited

For use with Technical Documents (when appropriate)				
EDC-	FMP-			
EDT-	ECN-			
Project No.:	Division:			
Document Type: RPT	Page Count: 1182			

For use with Speeches, Articles, or Presentations (when appropriate)								
Abstract			Summary		Full Paper		Visual Aid	
Conference	Name):						
Conference Date:								
Conference Location:								
Conference	Spons	sor:						
Published in	:							
Publication [Date:							

TRADEMARK DISCLAIMER

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Scientific or technical information is available to U.S. Government and U.S. Government contractor personnel through the Office of Scientific and Technical Information (OSTI). It is available to others through the National Technical Information Service (NTIS).

This report has been reproduced from the best available copy.

TABLE OF CONTENTS

INTRODUCTION	1
OPERABLE UNIT:	
100-BC-1	3
100-BC-2	
100-DR-1	49
100-DR-2	88
100-FR-1	106
100-FR-2	138
100-HR-1	147
100-HR-2	166
100-IU-1	174
100-IU-2	179
100-IU-3	203
100-IU-4	216
100-IU-5	217
100-IU-6	218
100-KR-1	235
100-KR-2	240
100-NR-1	294
200-BP-6	
200-BP-7	351
200-BP-9	399
200-BP-11	400
200-CS-1	402
200-CW-1	405
200-CW-2	422
200-CW-3	429
200-CW-4	432
200-CW-5	436
200-IS-1	447
200-IU-1	485
200-IU-2	488
200-IU-3	489
200-IU-5	492
200-IU-6	494
200-LW-1	495
200-LW-2	499

200-MW-1	506
200-NO-1	549
200-PO-2	551
200-PO-3	559
200-PO-6	612
200-PW-1	613
200-PW-2	618
200-PW-3	632
200-PW-4	638
200-PW-5	644
200-PW-6	648
200-RO-1	652
200-RO-2	653
200-RO-3	655
200-RO-4	666
200-SC-1	690
200-SO-1	696
200-SS-1	698
200-SS-2	700
200-ST-1	701
200-SW-1	
200-SW-2	752
200-TP-1	774
	775
200-TP-4	776
200-TP-5	781
200-TP-6	803
200-TW-1	814
200-TW-2	829
200-UP-2	841
	868
	917
200-ZP-3	918
	920

INTRODUCTION

SCOPE AND PURPOSE

The Hanford Site Waste Management Units Report (HSWMR) has been created to meet the requirements of the Tri-Party Agreement (TPA) Action Plan, Section 3.5, which states: "A waste management report...shall be generated annually by the DOE in January of each year, and posted electronically for regulator and public access. This report shall reflect all changes made in waste management unit status during the previous year."

This January 2004 version of the HSWMR contains a comprehensive inventory of all 2710 sites in the Waste Information Data System (WIDS). The information for each site contains a description of each unit and the waste it contains, where applicable. The WIDS database provides additional information concerning the sites contained in this report and is maintained with daily changes to these sites.

DEFINITIONS

The HSWMR shows the classification and reclassification designations for each site. These designations are based on definitions in TPA procedure TPA-MP-14. Classification designations for a site are "Accepted" "Rejected" "Rejected (Proposed)" and "Discovery."

In brief, the definitions for these classification designations are as follows:

- "Accepted" sites are waste management units
- "Rejected" sites are sites that were evaluated and found not to be waste management units, and this evaluation has been approved by the appropriate regulatory agency
- "Rejected (Proposed)" sites have also been evaluated and tentatively identified as not waste management units, but this evaluation has not yet been approved by the appropriate regulatory agency
- "Discovery" sites have not yet had the evaluation completed.

The reclassification designations may be defined as follows:

- Blank, for "Accepted" waste management units where an actual or potential hazardous substance is known or assumed to have been released and be present
- "Rejected" for sites where there is no evidence of an actual or potential hazardous substance; this reclassification has been approved by the appropriate regulatory agency

- "Rejected (Consolidation)" for sites that will be dispositioned as part of another WIDS site
- "No Action" for sites that do not require action under RCRA Corrective Action, CERCLA, or other regulatory authority
- "Closed Out" for sites that have been remediated and meet clean up standards or other regulatory authority requirements
- "Interim Closed Out" for sites that have been remediated under an Interim Record of Decision, but for which a Final Record of Decision has not been issued
- "Deleted from NPL" for sites that have been included in a final action published in the Federal Register to delete a listing from the National Priorities List.

ORGANIZATION

The waste management units at the Hanford Site are grouped into operable units with similar characteristics, based either on processes that caused the waste (for the 200 Areas) or geographically (for the 1100, 300, and 100 Areas). The HSWMR organization is based on the waste site grouping within the operable units.

100-BC-1

Site Code: 100-B-2 Classification: Accepted

Site Names: 100-B-2, 181-B Backwash Trench, ReClassification:

Backwash Trench, Undocumented Liquid Waste Site, Miscellaneous Stream #73

Site Type: Trench Start Date: 1975

Site Status: Inactive End Date:

Site The site is a trench that was constructed to receive backwash filter backflush from the 181-B **Description:** Pumphouse. The trench was fed by a single 30 centimeter (12 inch) pipeline that originated at the

backwash filter. The pipe is approximately 0.9 meters (3 feet) below grade and enters the trench from the west. Before construction of the trench, the backflush water was returned directly to the

Columbia River.

Waste Type: Water

Waste The site received river screen backwash water effluent.

Description:

Site Code: 100-B-3 Classification: Accepted

Site Names: 100-B-3, Hot Thimble Burial Ground, ReClassification: No Action (4/2/2003)

Undocumented Solid Waste Site

Site Type: Burial Ground Start Date: 1952

Site Status: Inactive End Date:

Site The site has been remediated and reclassified.

Description:

Waste Type: Equipment

Waste A highly contaminated vertical thimble was removed from the 105-B Reactor Building in 1952

Description: and temporarily buried in a trench. The thimble was later removed and taken to another burial

ground. Radioactive contaminants may remain in the trench.

Site Code: 100-B-4 Classification: Rejected (9/9/1997)

Site Names: 100-B-4, Building Foundation, **ReClassification:**

Undocumented Solid Waste Site

Site Type: Spoils Pile/Berm Start Date:
Site Status: Inactive End Date:

Site The site is a rectangular area 8.5 meters (28 feet) east/west by 13.1 meters (43 feet) north/south

Description: and encircled by large stones neatly stacked 0.3 meters (1 foot) high. Inside the area and on the

and encircled by large stones neatly stacked 0.3 meters (1 foot) high. Inside the area and on the north end is a 4 meter (13 foot) by 4.0 meter (13 foot) area encircled by 0.3 meter (1 foot) soil

berm. Two 0.3 meter (1 foot) mounds of soil are in the south portion of the area. The

surrounding area appears to have been a plowed field that was cleared of large stones. A long line of similar rocks runs parallel to the perimeter road, between the encircled area and the road. The site is distinguishable from the surrounding area only by the arrangement of large stones and soil. During a site visit on 9/13/94, two metal objects were present nearby, but didn't appear to be necessarily associated with this site. One of the objects looked like an empty, rusty paint can.

Site Code: 100-B-5 Classification: Accepted

Site Names: 100-B-5, Effluent Vent Disposal Trench, ReClassification: Interim Closed Out (9/11/2003)

116-B-9, 105-B Effluent Vent Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1956

Site The site has been remediated and closed out.

Description:

The site was the result of leakage that occurred at a junction box [probably at the 0.61-meter (2-foot) vent pipe], where the 1.4-meter (54-inch) 100-B Reactor cross tie pipeline effluent joined the 1.7-meter (66-inch) 100-C Reactor pipeline effluent, resulting in contamination of the area (Dorian and Richards).

Waste Type: Process Effluent

Waste The waste was process effluent contaminated soil. Sample numbers (Dorian and Richards) and

Description: depths were: B - 4.6, 6.1, 8.4 meters (15, 20, 27.5 feet); C - 3.05 meters (10 feet); D - 4.6, 6.1, 8.4 meters (15, 20, 27.5 feet); E - 4.6, 5.3, 7.6 meters (15, 17.5, 25 feet); F - 4.6, 6.1, 8.4 meters

(15, 20, 27.5 feet); H - 6.1 meters (20 feet). Samples were analyzed for plutonium-238,

plutonium-239/240, strontium-90, hydrogen-3, europium-152, cobalt-60, europium-154, cesium-

234, cesium-137, europium-155, and uranium.

Site Code: 100-B-7 Classification: Rejected (4/10/2002)

Site Names: 100-B-7, 100-B Service Water Pipelines, ReClassification:

100-B Clean Water Pipelines

Site Type: Product Piping Start Date: 1944
Site Status: Inactive End Date: 1968

Site The site encompasses the clean water upstream pipelines for the 100-B Area, including **Description:** underground pipelines used to transport raw, fire, export, and sanitary water from the riv

underground pipelines used to transport raw, fire, export, and sanitary water from the river pumphouse, to the water treatment facilities and to 100-B Area facilities and fire hydrants. Lines within buildings, process and septic sewer pipes, pipes that carried water treated with sodium dichromate, and all lines that are downstream from the reactor building, i.e., those lines that carry

cooling water from the reactor to the retention basin, trench, and/or the river are excluded.

Waste Type: Water

Waste Only uncontaminated piping remains.

Description:

Site Code: 100-B-8 Classification: Accepted

Site Names: 100-B-8, 100-B Reactor Cooling Water ReClassification:

Effluent Underground Pipelines (2 Subsites)

Site Type:Radioactive Process SewerStart Date:1944Site Status:InactiveEnd Date:1968

Site The site encompasses the underground 100-B Reactor cooling water effluent pipelines. These include the effluent pipelines that transported 105-B Reactor cooling water from the reactor core

to the 116-B-11 (107-B) Retention Basin, and from the basin to the 116-B-7 (1904-B) outfall

structure. This waste site includes all associated expansion and valve boxes and excludes the retention basin, outfall structure, and those effluent pipelines that are within the confines of the 105-B Reactor Building or that run from the outfall structure to the bottom of the river. It also excludes all reactor influent pipelines that are upstream (untreated and treated water pipelines) of the 105-B Reactor Building.

Waste Type: Process Effluent

Waste Description:

The waste is radioactively contaminated steel piping, concrete, and soil. Reactor cooling water became radioactively contaminated as it passed through the reactor core. Activation products created in the water included calcium-41, chromium-51, and zinc-65. Activation products from the reactor core that were picked up and transported by the cooling water included tritium, carbon-14, cobalt-60, nickel-63, and europium-152/154/155. Fuel element fission products, such as strontium-90, and cesium-137, as well as transuranics such as plutonium-239/240 were introduced into cooling water due to fuel cladding failures. Concentrations of radionuclides in cooling water during normal reactor operations were approximately 0.2 microcuries/liter. Concentrations of radionuclides have built up in rust flakes and scale on the inner surfaces of the pipelines and in sludge in the diversion and junction boxes. Average beta-gamma concentrations for the effluent pipeline scale and junction/diversion boxes were 83,000 and 120,000 picocuries/liter, respectively. Average plutonium-239/240 concentrations were 66 picocuries/gram for the effluent pipeline scale and 720 picocuries/gram for the sludge at the bottom of the diversion and junction boxes. Direct readings of the bottom of the effluent pipelines averaged approximately 40,000 counts/minute with a Geiger-Mueller probe. Additional chemicals were added to the effluent for purposes of water treatment. These included aluminum sulfate (alum), with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter.

SubSites:

SubSite Code: 100-B-8:1

SubSite Name: 100-B-8:1, 100-B Area South Effluent Pipelines

Classification: Accepted

ReClassification:

Description: This subsite includes the underground effluent pipelines surrounding the 105-B Reactor

(excluding a 7.6 meter [25 foot] buffer zone) of the reactor foundation, and running north

from the reactor to B Avenue.

SubSite Code: 100-B-8:2

SubSite Name: 100-B-8:2, 100-B Area North Effluent Pipelines

Classification: Accepted

ReClassification:

Description: This subsite includes the 105-B Reactor effluent pipelines from B Avenue north to the 116-B-

11 Trench, the pipelines from the 116-B-11 Trench to the 116-B-7 Outfall, and the east-west connecting pipeline from 100-B-8:2 to the diversion box for the 100-C-6 pipelines, which is just south of the 116-C-5 Retention Basins. It also includes the pipeline connecting to the 116-C-5 Retention Basin; this pipeline (the part outside of the excavation/sampling area footprint) was removed as part of the 116-C-5 remedial action but not sampled for cleanup verification

at that time.

Site Code: 100-B-10 Classification: Accepted

Site Names: 100-B-10, 107-B Basin Leak and Warm ReClassification: No Action (4/11/2002)

Springs

Site Type: Unplanned Release Start Date: 1949

Site Status: Inactive End Date:

Site The site is an unknown location along the Columbia River shoreline. It was reported in February

Description: 1949 as a warm springs below the 116-B-11 Retention Basin, and was attributed to leaks in the

wall of the north basin.

This spring no longer exists and the precise location is unknown. The groundwater that fed the

spring is a separate Operable Unit (100-BC-5).

Waste Type: Water

Waste A sample of the water showed beta activity of 4E-03 microcuries/liter.

Description:

Site Code: 100-B-11 Classification: Accepted

Site Names: 100-B-11, 115-B/C Caisson Site, 115-BC ReClassification:

Sump, 115-BC Drywell, 115-B Tank, 115-

B/C Caisson Valve Pit

Site Type:Storage TankStart Date:1944Site Status:InactiveEnd Date:1969

Site The site has been demolished and is no longer discernible from the surrounding area. The site **Description:** was a steel pipe structure (caisson) about 1.2 meters (4 feet) in diameter and 1.5 meters (5 feet)

deep with a bottom and a steel plate placed over the top. The site was self contained without any incoming or outgoing piping. This caisson was identified during a pre-demolition walk-through

of the 115-B/C Gas Recirculation Building.

Waste Type: Soil

Waste Originally, the caisson contained a yellowish-colored soil which was sampled for pH and EP **Description:** toxic metals. Sample results indicated a pH of 8 and 72,500 milligrams/liter of chromium.

toxic metals. Sample results indicated a pH of 8 and 72,500 milligrams/liter of chromium. Additional samples were taken (after caisson removal) from soil directly underneath and around the outside of the caisson. Results from these samples showed chromium levels ranging from 0.08 milligrams/liter to 9.14 milligrams/liter. The caisson contained approximately 0.37 cubic

meters (13 cubic feet) of chromate contaminated soil.

Site Code: 100-B-12 Classification: Accepted

Site Names: 100-B-12, Filter Box Radiological ReClassification: Interim Closed Out (5/31/2001)

Materials Area (RMA)

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site The location is a gravel field with sparse, weedy vegetation that matches the rest of the fenced

Description: 100-BC area.

The site was a Radiological Materials area (RMA) with four metal boxes containing filters, that

rested on shoring that sat on the bare soil. An additional six filter frames, marked as having fixed contamination, rested directly on the soil.

Waste Type: Equipment

Waste The radiological contamination is fixed on the filter frames.

Description:

Site Code: 100-B-14 Classification: Accepted

Site Names: 100-B-14, 100-B Area Process and **ReClassification:**

Sanitary Sewer Underground Pipelines

Site Type:Process SewerStart Date:1944Site Status:InactiveEnd Date:1969

Site This site includes the underground process sewers associated with the 100-B Area operations. It

Description: also includes the pipelines feeding the 1607-B2 and 1607-B7 Septic Systems, the sodium

dichromate pipelines running from the 108-B Building to the 190-B Building, and the treated

water pipelines between the 190-B Building and the 105-B Reactor.

Waste Type: Equipment

Waste Description:

The waste is the abandoned process and sanitary sewer pipelines, and any residual chemicals remaining on the pipes. Chemical additives to the reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, the free chlorine residual was approximately 0.2 milligrams/liter, and sodium dichromate was added at a rate of about 2 milligrams/liter. One length of the product piping held undiluted sodium dichromate: the pipe from the 185-B/190-B to the 108-B Building (per drawing M2913, Sheet 5). This pipeline was in use only for a few years, until the sodium dichromate was added to the cooling water at the 185-B Building. (Note: Reference: WHC-SD-EN-TI-169 is for 100-F, and applies equally to 100-B).

Site Code: 100-B-15 Classification: Accepted

Site Names: 100-B-15, 100BC River Effluent Pipelines, **ReClassification:**

100BC River Lines, 100-B-15:1 Flumes

Site Type:Radioactive Process SewerStart Date:Site Status:InactiveEnd Date:

Site Description:

This site includes the river effluent pipelines (riverlines) that extend from each of the three outfalls in the 100BC area into the main channel of the Columbia River. See subsite 100-B-15:1 for information on the flumes that were used to discharge effluent water when the river pipelines were blocked, damaged or undergoing maintenance.

The riverline extending from the 1904-B1 (116-B-7) outfall is constructed of 107-centimeter (42-inch) diameter carbon steel pipe with a 1.3-centimeter (1/2-inch) thick wall. The line is 228 meters (750 feet) long. The last 13 meters (40 feet) of the pipeline are exposed on the river floor.

The riverlines extending from the 1904-B2 (132-B-6) outfall is constructed of 168-centimeter (66-inch) diameter carbon steel pipe with a 1.3-centimeter (1/2-inch) thick wall. The line is 210 meters (690 feet) long. The last 30 meters (100 feet) of the pipeline are exposed on the river floor.

The riverlines extending from the 1904-C (132-C-2) consist of two 137-centimeter (54-inch) diameter steel pipe with a 1.3-centimeter (1/2-inch) thick walls. The lines are 152 meters (500 feet) long. Both lines are exposed at various locations along the pipe run.

Waste Type: Equipment

Waste The waste includes the pipelines and the contaminated scale contained within them.

Description:

SubSites:

SubSite Code: 100-B-15:1

SubSite Name: 100-B-15:1 Flumes from Outfall Structures 116-B-7, 132-B-6, 132-C-2

Classification: Accepted

ReClassification:

Description: Descriptions of the three flumes follows:

132-C-2 Overflow Flume was a concrete flume that did not extend to the river shoreline, but instead spilled onto large basalt riprap and, ultimately, to the river.

116-B-6 was a concrete overflow spillway that led to the top of the riverbank and a basalt boulder riprap flume that passed from the concrete spillway to the edge of the river. If the main line were to plug, the effluent would overflow into the spillway, pass over the riprap flume, and be discharged to the river at the shoreline.

116-B-7 Flume was also a concrete spillway that terminated at the river shoreline. The spillway has been backfilled from the outfall structure to the river shoreline.

Site Code: 100-B-16 Classification: Accepted

Site Names: 100-B-16, Utility Poles and Fixtures Debris **ReClassification:**

Pile

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site

Description:

Waste Type:

This site is two piles of debris from tearing down electrical utility poles. The piles includes treated wood poles and cross beams, lead-tipped bolts and other metal pieces, wood pallets, wiring, light fixtures, and ceramic insulators. An August 2001 site investigation showed some small boxes (8 by 4 by 5 inches [20 by 10 by 12.5 centimeters) that have been preliminarily identified (Bidstrup, personal communication) as dry transformers. No sign of leakage from these boxes was evident. A particle board marked "Envirocon" is on top of the north pile.

A second pile of just treated poles is south of the remedial action trailers.

Misc. Trash and Debris

• •

Waste The waste includes creosote-treated wood poles and cross beams, lead-tipped bolts and other debris. A few small boxes were seen that could be transformers. The possible transformers do not seem to be leaking an oil. Other debris includes particle board, conduit, light fixtures, wire,

insulators, junction boxes, chain link fence and incandescent light bulbs.

Site Code: 100-B-17 Classification: Discovery

Site Names: 100-B-17, Transite On Columbia River **ReClassification:**

Shoreline at 100B

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site

Description:

Site Code: 116-B-1 Classification: Accepted

Site Names: 116-B-1, 107-B Liquid Waste Disposal ReClassification: Interim Closed Out (12/8/1999)

Trench, Process Effluent Trench

Site Type:TrenchStart Date:1950Site Status:InactiveEnd Date:1968

Site The 116-B-1 Liquid Waste Disposal Trench was dug to receive effluent routed from 116-B-11 **Description:** (107-B Retention Basin). The unit ran from southwest to northeast. The site includes the 40.6

(107-B Retention Basin). The unit ran from southwest to northeast. The site includes the 40.6 centimeter (16 inch) diameter steel piping from 116-B-11. Historical documents describe the trench as a french drain or an excavation that is partly or completely filled with coarse gravel and has dimensions of 61 meters (200 feet) long by 9.1 meters (30 feet) wide by 4.6 meters (15 feet) deep. A geophysical investigation of 116-B-1 performed in November and December 1996 showed the trench was almost twice as long as indicated by historical information (see

Dimensions). The Ground Penetrating Radar (GPR) survey identified a pipeline, labeled #10 in the survey report, entering the trench at its southwest end. No other pipelines were evident. A

significant volume of buried debris was present in the northeastern half of the trench.

Waste Type: Process Effluent

Waste The site received effluent from the 107-B Retention Basin at times of high activity due to fuel

Description: element failures. The fission products of 54 fuel ruptures were routed to this site.

Waste Type: Misc. Trash and Debris

Waste Geophysical investigation identified a high concentration of subsurface debris in the

Description: northeastern half of the trench.

Site Code: 116-B-2 Classification: Accepted

Site Names: 116-B-2, 105-B Storage Basin Trench, B- ReClassification: Interim Closed Out (2/24/2000)

Storage Basin Crib

Site Type: Trench Start Date: 1946
Site Status: Inactive End Date: 1946

Site This site was remediated and closed out on February 24, 2000. It is no longer marked or posted.

Description:

The trench was used one time to receive approximately 4E+06 liters (1.1E+06 gallons) of storage basin water that became contaminated when a fuel rod was accidentally cut in half. The trench

was backfilled after use with clean dirt.

Waste Type: Water

This unit was dug and used once after a fuel element was accidentally cut in half in the 105-B Storage Basin. Basin water was discharged to this unit in an attempt to remove radionuclides from the fuel storage basin cooling water for contamination control.

Site Code: 116-B-3 Classification: Accepted

Site Names: 116-B-3, 105-B Pluto Crib ReClassification: Interim Closed Out (2/24/2000)

Site Type:CribStart Date:1951Site Status:InactiveEnd Date:1952

Site The 116-B-3 Pluto Crib has been remediated and was closed out on February 24, 2000. It is no

Description: longer marked or posted.

This unit was a wooden crib shored with railroad ties, filled with gravel and covered to grade with clean soil. A concrete marker indicates the position of the crib. Clukey (1954) indicates that the crib is a french drain, otherwise defined as a "tile or pipe buried vertically, sometimes gravel-filled". After its use, the crib was reportedly unearthed and shored with wooden ties.

Waste Type: Water

Waste The site received effluent from reactor tubes containing ruptured fuel elements.

Description:

Site Code: 116-B-4 Classification: Accepted

Site Names: 116-B-4, 105-B Dummy Decontamination ReClassification: Interim Closed Out (2/24/2000)

French Drain, 105-B Dummy Decontamination Disposal Crib

Site Type:French DrainStart Date:1957Site Status:InactiveEnd Date:1968

Site This site has been remediated and closed out. It is no longer marked or posted.

Description:

The unit had a graded rock and sand bottom. It was marked with four yellow steel posts and had a curved stainless steel pipe in the center along with a painted concrete marker. The site included a

feed pipe that originated at the 105-B Building.

Waste Type: Process Effluent

Waste The site received spent acid and rinse water from the 105-B Dummy (fuel element spacers and

Description: reactor hardware) Decontamination Facility.

Site Code: 116-B-5 Classification: Accepted

Site Names: 116-B-5, 116-B-5 Crib, 116-B-5 Trench, ReClassification: Interim Closed Out (1/14/1997)

108-B Crib

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1968

Site The crib structure and its contents have been removed. The crib was constructed of concrete timbers and consisted of 12 rectangular cells in a single row. Each cell was partially filled with

sandy gravel and had a separate concrete lid. For cleanup purposes, the cells were identified using the letters "A" through "L", with cell A being the southernmost cell.

Waste Type: Process Effluent

Waste The site received liquid tritium wastes from the 108 Building. Only wastes of less than 1

Description: microcuries/cubic centimeter were discharged to this unit.

Site Code: 116-B-6A Classification: Accepted

Site Names: 116-B-6A, 111-B Crib No. 1, 116-B-6-1 **ReClassification:** Interim Closed Out (5/17/2000)

Site Type:CribStart Date:1951Site Status:InactiveEnd Date:1968

Site This site has been remediated and closed out.

Description:

Waste Type: Process Effluent

Waste The unit received radioactive liquid wastes from equipment decontamination performed in the **Description:** 111-B Building, as well as from the decontamination of fuel element spacers performed at the

111-B Building Decontamination Station.

Site Code: 116-B-6B Classification: Accepted

Site Names: 116-B-6B, 111-B Crib No. 2, 116-B-6-2 **ReClassification:** Interim Closed Out (2/24/2000)

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1953

Site This site has been remediated and closed out. The site was commonly known as the 116-B-6B

Description: Crib, although it has also been known as 111-B Crib No. 2 and as 116-B-6-2.

Waste Type: Process Effluent

Waste The site received radioactive wastes from equipment decontamination performed in the 111-B

Description: Building as well as liquid wastes from fuel element spacer decontamination.

Site Code: 116-B-7 Classification: Accepted

Site Names: 116-B-7, 1904-B-1 Outfall Structure, 1904- ReClassification: Interim Closed Out (7/25/2002)

B1

Site Type:OutfallStart Date:1944Site Status:InactiveEnd Date:1972

Site The site has been remediated and closed out.

Description:

The outfall was excavated, sampled and backfilled to match the surrounding grade.

Waste Type: Process Effluent

Waste The outfall was originally used for both process sewer and reactor cooling water disposal until

Description: 1954 when it was used exclusively for process sewer disposal.

Site Code: 116-B-9 Classification: Accepted

Site Names: 116-B-9, 104-B-2 French Drain ReClassification: Interim Closed Out (2/24/2000)

Site Type:French DrainStart Date:1952Site Status:InactiveEnd Date:1954

Site The site has been remediated and closed out.

Description:

The site is a french drain that was related to the 104-B-2 Tritium Laboratory (118-B-9). The site includes the feed pipeline that originated at the 104-B Building. The drain was not originally apparent from the surface. Ground Penetrating Radar (GPR) revealed an anomaly consistent with a french drain. Photo images #2 and #3 show the french drain.

Waste Type: Process Effluent

Waste The site received waste water from the P-10 Storage Building drain. Since the P-10 project involved tritium production, tritium may be a potential contaminant. The drain is not currently

posted as being contaminated. An evaluation to determine potential contaminants for the 100 Area SAP resulted in four COPCs: coalt-60, cesium-137, europium-152, and strontium-90.

Site Code: 116-B-10 Classification: Accepted

Site Names: 116-B-10, 108-B Dry Well, Quench Tank ReClassification: Interim Closed Out (2/24/2000)

Site Type:SumpStart Date:1950Site Status:InactiveEnd Date:1968

Site The site was remediated in 1999 and closed out in February 2000. It is no longer marked or

Description: posted

The site was a french drain with a metal manhole type cover and constructed of a 61-centimeter (24-inch) vitrified clay pipe on subsurface concrete slab. It was covered with a plywood cover and clean backfill material. A 3.8-centimeter (1.5-inch) drain line was added in the mid-50s that came from the experimental tube and other hardware decontamination facility. All piping leading

into the drain was removed at the time of the 108-B demolition.

Waste Type: Process Effluent

Waste This site received liquid decontamination wastes from the 108-B Tube Examination and Experimental Facility. During the tritium recovery programs, the site also received liquid

decontamination wastes from the mask and small tool decontamination station located on the second floor and storm runoff from the fan room roof. The 108-B Building was involved with

tritium recovery activities so tritium is a possible contaminant of concern.

Site Code: 116-B-11 Classification: Accepted

Site Names: 116-B-11, 107-B Retention Basin, 116-B- ReClassification: Interim Closed Out (12/8/1999)

11 Retention Basin

Retention Basin **Start Date:** 1944 Site Type: **Site Status:** Inactive **End Date:** 1968

The site has been remediated and closed out. It includes the retention basin and the two effluent Site

pipes running parallel to, and adjacent to, the north side of the basins. These pipes were removed

as part of the plume removal during the retention basin remedial action.

Waste Type: Water

Description:

This unit received cooling water effluent from the 105-B Reactor for radioactive decay and Waste thermal cooling prior to release to the Columbia River. Total radionuclide inventories in the **Description:**

vicinity of the unit ranged from 5 to over 400 curies. Eighty percent of the total radionuclide inventory is contained within the soil adjacent to the unit. Approximately 10 curies have leached

into the concrete floor and walls.

Site Code: 116-B-12 **Classification:** Accepted

116-B-12, 117-B Crib, 117-B Seal Pit Crib **ReClassification:** Interim Closed Out (2/24/2000) **Site Names:**

1961 **Site Type:** Crib **Start Date: End Date:** 1968 **Site Status:** Inactive

Site This site has been remediated and closed out. The site was a crib with bottom measurements of

Description: 6.1 meters (20 feet) by 15.24 meters (50 feet).

Waste Type: Process Effluent

Waste The site received drainage from the confinement system in the 117-B Building seal pits. From **Description:**

process knowledge, the waste site contaminants of concern (COCs) identified in the SAP (DOE-

RL 1998) include strontium-90, uranium-238, and hexavalent chromium (Cr+6).

Site Code: 116-B-13 **Classification:** Accepted

Site Names: 116-B-13, 107-B South Sludge Trench, **ReClassification:** Interim Closed Out (7/22/1999)

116-B-8, 107-B #2 Grave, Basin Sludge

Burial Pit

Site Type: Trench **Start Date:** 1952 Inactive **End Date:** 1952 **Site Status:**

This site has been remediated, backfilled, and revegetated. It has been closed out. Site

Description:

Waste Type: Sludge

Waste The unit received low-level sludge waste from the bottom of 116-B-11 (107-B Retention

Basin). During maintenance clean out operations, sludge was disposed of in the trench. There is **Description:**

no indication from available records that this site directly received any regular and/or high-

volume effluent wastes.

Potential contaminants of concern included: americium-241, cobalt-60, cesium-137, europium-152, europium-154, europium-155, plutonium-238, plutonium-239/240, strontium-90, uranium-

238, total chromium, hexavalent chromium (Cr+6), mercury, and lead.

Site Code: 116-B-14 Classification: Accepted

Site Names: 116-B-14, 107-B North Sludge Trench, ReClassification: Interim Closed Out (7/22/1999)

 $107\text{-}B\ Liquid\ Waste\ Disposal\ Trench\ No.$

1, 116-B-2, 107-B #1 Grave

Site Type:TrenchStart Date:1948Site Status:InactiveEnd Date:1948

Site The 116-B-14 site appears as an open field covered with cobbles and sparse vegetation.

Description:

The site has been remediated and closed out.

Waste Type: Sludge

Waste The unit received low-level sludge waste from the bottom of 116-B-11 (107-B Retention Description: Basin). During maintenance clean out operations, sludge was disposed of in the trench. There is

no indication from available records that this site directly received any regular and/or high-volume effluent wastes. After its use, the waste site was covered with about 1.8 meters (6 feet)

of soil.

Potential contaminants of concern included: americium-241, cobalt-60, cesium-137, europium-152, europium-154, europium-155, plutonium-238, plutonium-239/240, strontium-90, uranium-

238, total chromium, hexavalent chromium (Cr+6), mercury, and lead.

Site Code: 116-B-15 Classification: Accepted

Site Names: 116-B-15, 105-B Fuel Storage Basin **ReClassification:**

Cleanout Percolation Pit, 105-B Fuel Storage Discharge Pond, 105-B Pond

Site Type: Pond Start Date: 1984

Site Status: Inactive End Date: 1985

Site This site has been excavated. The unit is a large, open, excavated pit, rectangular in shape. The

Description: site was used from November 1984 to December 1985. Soil excavated from the center was used

as a berm around its perimeter.

Waste Type: Water

Waste The unit received processed water from the 105-B Fuel Storage Basin. During the cleaning of this basin, the radiologically contaminated shielding water was processed through a system that

utilized ion exchange columns. Before discharging the water to the unit, composite samples were taken to ensure that radionuclide concentrations were below release criteria in Table II of DOE Order 5480.1. No known chemical substances were present in the water; however, chemical analysis during that period was not a standard practice, and there is no evidence that it

chemical analysis during that period was not a standard practice, and there is no evidence that it

was performed.

Site Code: 116-B-16 Classification: Accepted

Site Names: 116-B-16, 111-B Fuel Examination Tank ReClassification: Interim Closed Out (5/17/2000)

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1968

Site Description:

This site has been remediated and closed out.

The unit was a vegetation free, cobble-covered field located within a barricaded area at the former site of the 111-B Building. The floor, foundation, and tank were the only remaining portions of the building. The fuel examination tank was located along the west side of the barricaded area. A curved, capped ventilation pipe extended about 25 centimeters (10 inches) above ground just north and east of the tank location. The barricaded area was surrounded by light duty steel posts with light duty chain and has been posted with "Caution: Underground Radioactive Material" signs. The tank was constructed of concrete. It is believed that the tank was filled with either sand or concrete before the site was abandoned.

Waste Type: Process Effluent

Waste Description:

The unit is believed to have received wastes similar to those identified in 116-B-6A (111-B Crib No. 1); i.e., radioactive waste from equipment decontamination, the 111-B Building, and liquid wastes from fuel element spacer decontamination.

Site Code: 118-B-5 Classification: Accepted

Site Names: 118-B-5, Ball 3X Burial Ground ReClassification:

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1953

Site

Description:

The 118-B-5 (Ball 3X) Burial Ground contains one trench, which was covered with 1.5 meters (5 feet) of soil after its use was discontinued. The site appears as a vegetation free "L" shaped mound of cobbles, about 0.9 meters (3 feet) high, that is surrounded by permanent concrete markers and is outside the reactor exclusion area. The long south side of the burial ground is about 4.6 meters (15 feet) from a section of the reactor exclusion area fence that runs from north to south. The west side is about 6.1 meters (20 feet) from the fence. The site is posted with signs reading "118-B-5 Ball 3X Burial Grounds".

Waste Type: Equipment

Waste Description:

The unit received 40.00 cubic meters (1410 cubic feet) of highly contaminated metallic wastes, including thimbles and step plugs that were removed from the 100-B Reactor during the performance of work for the Ball 3X project. The Ball 3X project replaced the liquid boron system for emergency reactor control with a system using solid boron-steel and carbon-steel balls. Potential contaminates include: C-14, Co-60, Ni-63

Site Code: 118-B-7 Classification: Accepted

Site Names: 118-B-7, 111-B Solid Waste Burial Site **ReClassification:**

Site Type:Burial GroundStart Date:1951Site Status:InactiveEnd Date:1968

Site The unit appears as the southern portion of a cobble-covered field. The central portion of the **Description:** field is covered with natural vegetation and there is a permanent concrete marker in the southern

section.

Waste Type: Equipment

This unit received small amounts of waste from the 111-B Facility, which was originally used as a charge makeup and reactor fuel inspection station. After one year, the 111-B Facility was used as a decontamination facility for equipment and a workshop for low-level contaminated equipment. This unit also received decontamination materials and assorted equipment from that building. Small amounts of reactor hardware may have also been placed in this unit. Potential contaminates include: Co-60, Ni-63, RCRA metals

Site Code: 118-B-8 Classification: Accepted

Site Names: 118-B-8, 105-B Reactor Building, B **ReClassification:**

Reactor

Site Type:ReactorStart Date:1944Site Status:InactiveEnd Date:1968

Site Description:

The site is an inactive plutonium production reactor. The unit consists of a reactor block with associated shielding and controls, an irradiated fuel storage basin, and contaminated portions of the reactor building.

The reactor rests on a 7.0-meter (23-foot) thick concrete foundation topped with cast iron blocks that served as a thermal shield. The building walls consist of reinforced concrete in the lower portions and concrete blocks in the upper portions with thickness varying from 0.9 to 1.5 meters (3 to 5 feet). The roof is composed of precast concrete roof tile, except for the discharge area enclosure and inner horizontal rod room where the roofs are composed of 1.8-meter (6-foot) thick reinforced concrete.

The reactor core consists of a graphite "stack" that measures 8.5 meters (28 feet) from front to rear, 11.0 meters (36 feet) from side to side, and 11.0 meters (36 feet) from top to bottom. The stack is pierced front to rear by 2,004 process channels that held the fuel elements. Nine horizontal channels for control rods enter from the left side and 29 vertical channels for safety rods entered from the top. Six test holes labeled A through F, leading from the right, existed for irradiation of experiments, foils, counters, ionization chambers, and special samples. The horizontal control rod (HCR) and vertical safety rod (VSR) channels, as well as the test holes, were lined with a thin sheet of aluminum known as a "thimble".

The graphite core is surrounded by a cast iron thermal shield layer. Cooling for the top, side, and bottom shields was provided by circulating water tubes imbedded in the blocks. The entire reactor block was then enclosed in a welded steel box that functioned to confine the inert gas atmosphere within the reactor. Expansion joints were placed on the corners of the block to allow for thermal expansion and expansion bellows were located at each process tube opening. The bellows served as gas seals as the process tubes expanded and contracted with temperature and with the distortions of the graphite.

The fuel storage basin is located at the rear of the reactor. The concrete basin area served as a collection, storage, and transfer facility for the irradiated fuel elements discharged from the reactor. The water in the basins served both as coolant and as shielding. The basin consists of a discharge chute and fuel element pickup area, a storage area, a transfer area, and a wash pad area.

Waste Type: Equipment

Waste This unit contains an estimated 23,500 curies of radionuclides, 79,800 kilograms (88 tons) of

Description: lead, and 227 kilograms (500 pounds) of cadmium.

Waste Type: Asbestos (friable)

The site is estimated to contain 85.0 cubic meters (3000 cubic feet) of asbestos.

Site Code: 118-B-9 Classification: Accepted

Site Names: 118-B-9, 104-B-1 Tritium Vault and 104-B- ReClassification:

2 Tritium Laboratory, 104-B2 Storage

Building

Site Type:StorageStart Date:1950Site Status:InactiveEnd Date:1955

Site Description:

Today the site is a gravel-covered field. Originally, there were two concrete masonry facilities identified as 104-B-1 Tritium Vault and 104-B-2 Tritium Laboratory. Both structures were demolished and their associated foundations removed to 1 meter (3 feet) below grade. The excavated areas were then backfilled and graded to match the existing terrain. Demolition took place beginning in mid-September 1996 and was completed in October 1996.

Originally, the 104-B-1 Tritium Vault had a concrete foundation and concrete block walls. The 104-B-2 Tritium Laboratory was also a concrete structure with a small steel framed transite sided annex located on the east end. The Tritium Laboratory contained sixty-three (63) special cells recessed in the laboratory floor. These were used to store the vacuum casks which contained the irradiated target elements for the P-10 Project. The 104-B-2 Tritium Laboratory annex housed the air sampling equipment for the 108-B Stack. Prior to demolition, the laboratory had been deactivated, posted as radiologically contaminated, and used to store contaminated reactor refueling components from the 105-B and 105-C Reactors.

These facilities were put into service to support the P-10 Project. The P-10 Project was a special pilot program for the production and separation of tritium that was moved from the Argonne National Laboratory to the 100-B facility at Hanford.

Project C-412, one of several modifications for the P-10-X Extraction Facilities, describes the Product Storage Building (104-B2). The use of the new product vacuum tanks (shipping containers) necessitated the construction of a product storage building. Existing facilities did not accommodate the larger size of the new design metal product container nor the increased numbers of product containers. A reinforced concrete storage building designed to be "bomb resistant" was needed for this purpose. In addition, it needed safety features designed to dissipate the product via the ventilation stack in the event of container rupture or leakage during storage. Exhaust from the building was discharged to the 108-B Stack. Air monitoring equipment was housed in an adjoining light steel frame structure. The building was constructed to contain 63 filled product vacuum tanks.

Waste Type: Equipment

Waste Description:

The unit (104-B-2) contained trace amounts of radioactive waste. It was used to store containers of reactor refueling components from 105-B and 105-C Reactors. No liquid contaminants were involved. Bird droppings were also found in small quantities.

Following demolition activities, two 1.2 by 1.2 by 2.44-meter (4 by 4 by 8-foot) plywood burial boxes equivalent to 7.25 cubic meters (9.5 cubic yards) were taken to a burial ground. The burial boxes have numbers 100B-96-0002 and 100B-96-0017 and were shipped on 12/3/96 to burial ground 218-W-5, trench 29.

Waste Type: Demolition and Inert Waste

The facility (104-B-1) contained asbestos, consisting of caulking around exterior vents. Following demolition activities, 0.92 cubic meters (1.2 cubic yards) of non-friable cement asbestos board (CAB) were put into a dumpster and hauled away. The material was then shipped to Basin Disposal, Pasco for eventual disposal in the RABANCO landfill, Roosevelt. WA.

Total asbestos material identified was non-friable Category I: asphalt roofing 55 square meters (592 square feet), non-friable Category II: joint caulking 1.21 square meters (13 square feet), non-friable Category II: transite wall board 63.92 square meters (688 square feet). The total category I was 55 square meters (592 square feet) and Category I was 65.13 square meters (701 square feet).

Waste Type: Demolition and Inert Waste

Waste Description:

Lead based paint was found on the roof trim, vents, and exterior doors. Following demolition activities, 0.7646 cubic meters (1 cubic yard) of lead base painted wood was disposed to an offsite vendor's container (where other 100-B/C small buildings hazardous waste was temporarily stored). This material was identified as number 200E-96-0015 and was packaged in a Laidlaw box and shipped offsite to Laidlaw Lone Mountain Facility on Manifest A6344 on 12/9/96.

Waste Type: Demolition and Inert Waste

Waste Description:

The building was constructed of concrete block and the foundation was concrete. Following demolition activities, 110 cubic meters (144 cubic yards) of concrete rubble was disposed of in

the 100-F Clearwell.

Waste Type: Demolition and Inert Waste

Waste Description:

Following demolition activities, 0.7646 cubic meters (1 cubic yard) of miscellaneous metal from

iption: the two buildings was taken and staged with the 190-C recycle material.

Site Code: 118-B-10 Classification: Accepted

Site Names: 118-B-10, Ball 3X Storage Vault ReClassification:

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site Description:

The location for this burial ground shows a concrete pad with metal marker at the ground surface

in a gravel field. It is otherwise unmarked.

The site as mapped and marked in the field as of November 2001 appeared as a vegetation-free area that had been covered with cobbles piled to 0.6 meters (2 feet) above grade. However, this location is wrong. As shown on Drawing H-1-19820 and confirmed by ground-penetrating radar (GPR), the mound of cobble is backfill over a process sewer that was constructed over the ventilation tunnel to 115-B. The pipeline had to be close to the surface because of the tunnel, so it was encased in concrete and covered with 18 inches of backfill.

Waste Type: Equipment

Waste The waste is a radioactive metal storage tank used to store radioactive boron balls from the ball

Description: 3X system.

Site Code: 120-B-1 Classification: Accepted

Site Names: 120-B-1, 105-B Battery Acid Sump **ReClassification:**

Site Type:SumpStart Date:1944Site Status:InactiveEnd Date:1969

Site The unit appears as a concrete pit with a steel cover. Concrete repairs have been made to each of

Description: the four corners. The repairs suggest that the integrity of the structure may have been

compromised, creating the potential for leakage to the surrounding soils.

Waste Type: Chemicals

Waste The site contained unknown amounts of sulfuric acid from spillage during use and servicing of **Description:** an emergency power battery bank inside the 105-B Building. The residual liquid and sludge

were analyzed for heavy metals in 1986 using the EP Toxicity Test and chromium was found.

Site Code: 126-B-1 Classification: Accepted

Site Names: 126-B-1, 184-B Power House Ash Pit, 188- ReClassification: Rejected (6/25/1998)

B Ash Disposal Area

Site Type:Coal Ash PitStart Date:1944Site Status:InactiveEnd Date:1969

Site The 126-B-1 site is a large vegetation covered depression and surrounding ash piles. The

Description: depression is approximately 60 meters (200 feet) long, 60 meters (200 feet) wide, and 3 meters (10 feet) deep. An earthen berm divides the site into two sections. The pit is bounded on the north, east, and west sides by three large ash piles that extend 9 to 10 meters (30 to 33 feet) high. On the west side of the pit is a large wooden ramp that is in a state of disrepair. A large pipe enters the depression in the southwest corner. Including the surrounding ash piles, the overall site

dimensions are approximately 200 meters by 200 meters (650 feet by 650 feet).

Waste Type: Ash

Waste The site received coal ash from the 184-B Powerhouse. Coal ash from analogous sites has been

Description: analyzed using the EP Toxicity Test in accordance with WAC 173-303, and no hazardous

materials were found.

Site Code: 126-B-2 Classification: Accepted

Site Names: 126-B-2, 183-B Clearwells ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The unit was made up of two clearwells separated in the center by a pump room. The clearwells

Description: are covered, reinforced concrete and have a capacity of approximately 3.8E+07 liters (1E+07 callons). The numer race was constructed of reinforced concrete and was approximately 6.77.

gallons). The pump room was constructed of reinforced concrete and was approximately 6.7 meters (22 feet) deep. The clearwells remain intact, but the above grade portion of the pump room has been demolished. The unit currently appears as a depressed rectangular area that contains the below-grade portions of the clearwells and pump house. It is bounded with steel posts and light duty barricade chain, and is posted with signs reading "126-B-2 Clearwells" and "Danger: Keep Away." The black, paneled rooftops of the clearwell buildings are about 1.8

meter (6 feet) below grade. A concrete piping structure remains above ground at the southeast corner of the clearwell site. The site appears much as it did while the clearwells were operational, except that the above ground portion of the pump house has been demolished.

Waste Type: Demolition and Inert Waste

Waste Description:

No wastes were deposited at the clearwells in the past. However, this unit is scheduled for future use as a disposal site for demolition and inert solid waste after the 126-B-3 Coal Pit and demolition landfill is closed. The remaining portion of the pumphouse currently contains waste from the demolition of the above ground portion. These wastes were believed to include steel, concrete, and asbestos transite.

Site Code: 126-B-3 Classification: Accepted

Site Names: 126-B-3, 184-B Coal Pit ReClassification:

Site Type:Dumping AreaStart Date:1943Site Status:InactiveEnd Date:1968

Site The unit is a pit originally excavated to store coal for use in the powerhouse from 1943 through

Description: 1968. After coal storage was discontinued, the site was used as a demolition landfill.

Approximately 75% of this pit has been used for waste disposal and is covered with about 0.3 meters (1 foot) of pit run backfill material. As of 1995, the remaining 25% of this pit has been

backfilled and the surface stabilized to match the surrounding grade.

Waste Type: Demolition and Inert Waste

Waste Description:

This unit contains waste from demolished 100-B Facilities. These include released portions of 108-B, 117-B, 117-C, 115-BC, and 184-B. This unit is likely to contain lead acid batteries. There are aluminum filter frames from the 117-B and 117-C Facilities on the surface on the south side. Steel staircases and ladders have been deposited on the surface on the northeast side of the site.

Site Code: 126-B-4 Classification: Accepted

Site Names: 126-B-4, B Area Brine and Salt Dilution **ReClassification:** Rejected (9/9/1997)

Pits, 126-B-4 Brine Pit. 184-B Salt Dissolving Pit and Brine Pump House

Site Type:SumpStart Date:1944Site Status:InactiveEnd Date:1969

Site Description:

The salt dissolving pits and brine pump pit were part of a single below-grade concrete structure that provided brine for the 184-D Powerhouse. The structure has been demolished and buried in situ. No evidence of the site remains at the surface. Before the structure was demolished, it was described as being partially backfilled with rubble with approximately 1900 liters (500 gallons) of water in the brine pump pit.

The two salt dissolving pits each had inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.8 meters (9.25 feet) tall. They had a design high water line 2.4 meters (7.75 feet) from the pit bottom. An overflow slot connecting the two dissolving pits was located 0.3 meters (1 foot) above the high water line. The bottom of each pit was filled with a 12.7 centimeter (5 inch layer) of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The dissolving pits each

had a 2.4 meter (8 foot) by 0.9 meter (3 feet) opening at the top for receiving salt. Each pit had a capacity of 23,600 kilograms (52,000 pounds) of salt.

The brine pump pit is located adjacent to the two salt dissolving pits. The pit was 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.1 meters (7 feet) deep. It held two pumps and associated piping (all brass) for the brine system. The floor of the pump pit sloped toward a 46 by 46 by 46 centimeter (18 by 18 by 18 inch) sump in a corner.

Waste Type: Demolition and Inert Waste

Waste The structure was demolished and buried in situ.

Description:

Site Code: 128-B-1 **Classification:** Rejected (9/9/1997)

Site Names: 128-B-1, 100 B/C Burning Pit, 100-B ReClassification:

Burning Pit

Site Type: Burn Pit **Start Date:** 1943 **End Date:** 1968 **Site Status:** Inactive

Site The site has been described as a burn pit. During a field investigation on October 17, 1995, it was

Description: noted that the area is covered with cheatgrass and appears undisturbed with no evidence of

burning. An elevated area to the south is covered with rabbitbrush, boulders, and appears to be

disturbed. The elevated area also shows no evidence of burning.

128-B-2 **Site Code: Classification:** Accepted

Site Names: 128-B-2, 100-B Burn Pit #2 **ReClassification:**

Start Date: 1948 Site Type: Burn Pit **Site Status:** Inactive **End Date:** 1968

The site is on a dirt road that is apparently surfaced with coal ash and is identifiable by a pile of Site

large boulders. There are sand-blasting garnet, old paint cans, glues, asphalt, steel scrap, **Description:**

concrete, and other waste. There is also evidence of burning in the area.

Waste Type: Misc. Trash and Debris

The site received nonradioactive, combustible materials. Old paint cans and sandblast sand can Waste **Description:**

still be seen at the site. Office waste, paint waste, chemicals, and solvent were burned at this

site. It appears that clean fill material has been added to the site, indicating that the site may

have also been used as a solid waste landfill.

Site Code: 128-B-3 **Classification:** Accepted

128-B-3, 100-B Dump Site, 128-B-3 Coal **Site Names: ReClassification:**

Ash and Demolition Waste Site, 128-B-3

Burning Pit Site, 600-57

Site Type: Burn Pit 1944 **Start Date:** 1968 **Site Status:** Inactive **End Date:**

The 128-B-3 Coal Ash and Demolition Waste Site is an area where dumping and burning of waste Site material has occurred. No markers or signs are present at the site. The site is visible in a 1968 **Description:**

aerial photo and appears to have been divided into a construction debris dumping area to the south and a combustible waste burning area to the north. The site is separated into the two sections by an ash covered roadway. At the site's southern edge is an area of vegetation-free gravel, covered with what has been described as a "white-colored spray".

Waste Type: Misc. Trash and Debris

Waste Coal ash, burning evidence, and demolition rubble can be seen at the surface of the site. A 1952

Description: shop manual was found among the waste.

Site Code: 132-B-1 Classification: Accepted

Site Names: 132-B-1, 108-B Tritium Separation Facility **ReClassification:**

Site Type: Process Unit/Plant Start Date: 1944
Site Status: Inactive End Date: 1975

Site The building was composed of a steel frame and concrete block structure with a reinforced concrete foundation and floors. The interior was laid out into many individual rooms that w

concrete foundation and floors. The interior was laid out into many individual rooms that were used for laboratories, office, and change rooms. The original building was 12.5 meters (41 feet) above grade and 3.7 meters (12 feet) below grade. It was 40 meters (132 feet) long, with a 4.9-meter (16-foot) extension for an additional ventilation supply fan. Also, an annex 18 meters (60 feet) long by 9.8 meters (32 feet) wide was added to the southwest corner of the original building.

The building has been removed. The site is now a flat cobble field.

Waste Type: Demolition and Inert Waste

Waste The main radionuclide present at the site is tritium.

Description:

Site Code: 132-B-2 Classification: Accepted

Site Names: 132-B-2, 116-B Reactor Exhaust Stack, **ReClassification:**

132-B-2 Stack

Site Type:StackStart Date:1944Site Status:InactiveEnd Date:1968

The unit is part of the 105-B Reactor Gas and Exhaust Air System. The unit is still standing and constructed of reinforced concrete with a base diameter of approximately 4.9 meters (16 feet).

Waste Type: Demolition and Inert Waste

Waste Until the 117 Filter Building was built in 1960, air moving from the least contaminated zones **Description:** through increasingly contaminated zones was discharged to the unit unfiltered. The unit

received low-level contamination from the reactor.

Site Code: 132-B-3 Classification: Accepted

Site Names: 132-B-3, 108-B Ventilation Exhaust Stack ReClassification:

Site, 108-B Tritium Pilot Facility, Ventilation Exhaust Stack Site

Site Type: Burial Ground Start Date:

Site Status: Inactive End Date:

Site The site consists of a trench, which was used to bury low-level contaminated rubble from the

Description: demolition of the 108-B Ventilation Exhaust Stack, also known as the 108-B Tritium Pilot Facility Ventilation Exhaust Stack. The trench is 9.1 meters (30 feet) wide, 5.5 meters (18 feet)

deep, and 76 meters (250 feet) long. The stack foundation was found to be free of contamination. It was destroyed separately, buried in place and covered with clean fill material. Although it is on

the opposite side of the road, it is considered to be part of this site.

Waste Type: Demolition and Inert Waste

Waste The 91-meter (300-foot) stack was demolished in 1983 and buried at this site. The stack was **Description:** built of reinforced concrete and had a stainless steel liner. The total radionuclide inventory of

the buried stack rubble is 21 millicuries.

Site Code: 132-B-4 Classification: Accepted

Site Names: 132-B-4, 117-B Filter Building ReClassification: No Action (4/2/2003)

Site Type:Process Unit/PlantStart Date:1961Site Status:InactiveEnd Date:1968

Site Historical data compiled for the Calculation Brief number 0100B-CA-V0128 was of sufficient

Description: quality and quantity to support reclassification of the site.

The ventilation exhaust filter building housed blowers and particulate filters used to treat the ventilation exhausted from the B Reactor Building. Included in this site were the 117-B Building, the intake ventilation duct from the 105-D Reactor Building, and the exhaust ventilation ducts to

the 116-B Reactor Exhaust Stack.

Waste Type: Demolition and Inert Waste

Waste The site con

Description:

The site contained radiologically contaminated debris. Total radionuclide inventory in this unit was estimated to be 92 nanocuries. The radionuclides comprising this inventory were tritium,

carbon-14, cesium-137, strontium-90, and plutonium-239/240. Of these radionuclides, strontium-90 was the most restrictive in the allowable residual contamination level (ARCL) calculations. Cobalt-60, europium-152, europium-153, and europium-155 were not identified in

any of the samples analyzed.

Site Code: 132-B-5 Classification: Accepted

Site Names: 132-B-5, 115-B/C Gas Recirculation **ReClassification:**

Facility

Site Type:Process Unit/PlantStart Date:1944Site Status:InactiveEnd Date:1968

Site The unit consisted of a vacuum and pressure seal pit and tunnels. It was a single-story reinforced

Description: concrete structure with a basement. It was 6.1 meters (20 feet) above and 3.4 meters (11 feet)

below grade, and the width ranged from 22 meters (72 feet) to 30 meters (98 feet).

Waste Type: Demolition and Inert Waste

Waste The resident radionuclides are tritium, carbon-14, cobalt-60, strontium-90, cesium-137,

Description: europium-152, and plutonium-239.

Site Code: 132-B-6 Classification: Accepted

Site Names: 132-B-6, 1904-B-2 Outfall Structure Site, ReClassification: Interim Closed Out (7/25/2002)

116-B-8, 1904-B2

Site Type:OutfallStart Date:1954Site Status:InactiveEnd Date:1968

Site The site has been remediated and closed out.

Description:

A dirt road leading to the site is crossed by a vegetation-free outfall structure wall that was left

intact when the structure was backfilled to grade.

Waste Type: Process Effluent

Waste The unit received and discharged reactor coolant effluent wastes to the river. The 1904-B2

Description: Outfall received cooling water and process drainage from B Reactor and discharged through a

168-centimeter (66-inch) effluent line (100-B-15) to the middle of the Columbia River. A 1992 report states, "surface contamination is known to be present at the 132-B-6 spillway." Other

documents reviewed provided no information about wastes or contamination.

Site Code: 1607-B1 Classification: Accepted

Site Names: 1607-B1, 1607-B1 Septic Tank System, ReClassification:

124-B-1, 1607-B1 Sanitary Sewer System

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1960

Site The unit includes a septic tank, tile field, and pipeline form the badge house and patrol building. **Description:** The septic tank was constructed of reinforced concrete and has a 125 person capacity (132 liters

[35 gallons] per capita) with an average detention period of 24 hours. The walls and floor are 25 centimeter (10 inch) thick. The tile field is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe or drain tile with a minimum of 2.4 meter (8 linear feet) per capita. The laterals are open-jointed and spaced 2.4 meter (8 feet) apart. A gravel-covered field is located just west of the raised septic tank site. It may be the drain field for the 1607-B1 Septic Tank. The tile field was reported to be located in the field adjacent to the septic tank, but the exact location is not known. The unit currently appears as a vegetation and gravel covered area that is raised about 1.2 meters (4 feet) above the surrounding terrain. The septic tank is clearly marked on historical

drawings in the location of the raised mound.

Waste Type: Sanitary Sewage

Waste The unit received unknown amounts of sanitary sewage from the 1701-B Badgehouse (security

Description: checkpoint), the 1709-B Fire Station, the 1720-B Patrol Change Room, and offices.

Site Code: 1607-B2 Classification: Accepted

Site Names: 1607-B2, 1607-B2 Septic Tank System, ReClassification:

124-B-2, 1607-B2 Sanitary Sewer System

Site Type: Septic Tank Start Date: 1944

Site Status: Active End Date:

Site Description:

The site includes a septic tank and drain field. During the March 2000 field visit, it was observed that the top of the septic tank is at grade level except on the north side, where it is above grade. In many areas the edges of the concrete are obscured by soil and vegetation. There are three manholes in the top of the tank covered by metal covers with handles. The septic tank is surrounded by six black and yellow striped posts, each about 0.9 meter (3 feet) high, and a light-duty barricade chain. The site is identified with a blue and white "Septic Tank" sign.

The drain field is a vegetation-covered area surrounded with light-duty steel posts and light-duty barricade chain. During the March 2000 field visit, it was noted that some of the barricade has fallen. The site is identified with "Drain Field" signs.

Waste Type: Sanitary Sewage

Waste Description:

This unit received sanitary sewage from the 100 B/C Area office buildings, the 105-B Reactor Building, and the 190-B Pumphouse. All office buildings have been removed; however, the

sewer lines to the respective buildings still exist.

Site Code: 1607-B3 Classification: Accepted

Site Names: 1607-B3, 1607-B3 Septic Tank System, ReClassification: Closed Out (5/31/2001)

124-B-3, 1607-B3 Sanitary Sewer System

Site

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1974

Site Description:

The site is a closed out septic system which includes a septic tank, tile field, and associated piping. The site is no longer apparent and appears as a cobble-covered field with natural vegetation growing on its surface.

The 1607-B3 Septic Tank was constructed of reinforced concrete. The tank was 2.9 meters (9.5 feet) long, 1.4 meters (4.5 feet) wide and 3.5 meters (11.42 feet) deep (inner dimensions). The tank had a design capacity of 6,360 liters (1,680 gallons) based on a user capacity of 48 persons, a flow of 132 liters (35 gallons) of sewage per capita per day, and an average detention time of 1 day. The top of the tank was at the ground surface and the tank was accessible through three 0.9-meter (3-foot) manholes.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from 184-B Powerhouse. **Description:**

Site Code: 1607-B4 Classification: Accepted

Site Names: 1607-B4, 1607-B4 Septic Tank System, ReClassification: Closed Out (2/23/2001)

124-B-6, 1607-B4 Sanitary Sewer System,

1607-B4 Septic Tank

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:2000

Site Description:

The site is a closed out septic system associated with the 151-B Substation. A sign stating "Abandoned Septic Tank per WAC (246-272-1850) DynCorp Environmental" is posted at the site. There are four yellow posts surrounding the structure. Within the posts are the old wooden cover, a pile of sand, and cobble.

The septic tank is concrete box that had a wooden lid covered with asphalt roofing material. The reinforced concrete septic tank is 1.8 meters (6 feet) long, 0.9 meters (3 feet) wide, and 2.5 meters (8 feet, 4 inches) deep (inner dimensions). The tank had a design capacity of 1325 liters (350 gallons) based on a user capacity of 10 persons, a flow of 132 liters (35 gallons) of sewage per capita per day, and an average detention time of 1 day. The tank walls are 20 centimeters (8 inches) thick with a 15 centimeter (6 inch) floor. The tile field was constructed of 10 centimeter (4 inch) pipes with a minimum length of 2.4 meter (8 feet) per capita. The laterals are openjointed and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This unit received sanitary sewage from 151-B Electrical Distribution Facility. The flow rate to

Description: the unit was estimated at less than 132 Liters (35 gallons) per day.

Site Code: 1607-B5 Classification: Accepted

Site Names: 1607-B5, 1607-B5 Septic Tank System, ReClassification:

1607-B4, 1607-B4 Septic Tank System, 124-B-4, 1607-B4 Sanitary Sewer System

Site Type: Septic Tank Start Date: 1944

Site Status: Inactive End Date:

Site The septic tank can be identified by a 20 centimeter (8 inch) capped steel vent pipe. The cap is stamped "septic tank". It is surrounded by a vegetation-free graveled parking lot. The pipe

extends above grade about 0.76 meters (2.5 feet). The drain field runs southeast of the tank.

As a result of sampling results, the site was posted with "Underground Radioactive Material" signs.

Waste Type: Sanitary Sewage

Waste This unit received sanitary sewage from 181-B/C River Pumphouse. The flow rate to the unit was estimated at approximately 35 gal/day (130 L/day). In January 2001, the tank was sampled

and analyzed for radionuclides. All radionuclides were undetected except for cesium-137, which was 38.3 picocuries per liter and gross beta, which was 1.8 picocuries per liter.

Site Code: 1607-B6 Classification: Accepted

Site Names: 1607-B6, 1607-B6 Septic Tank System, ReClassification:

1607-B5, 1607-B5 Septic Tank System, 124-B-5, 1607-B5 Sanitary Sewer System

Site Type: Septic Tank Start Date: 1944

Site Status: Active End Date:

The site currently appears as a small concrete box with a wooden lid. It is posted with a **Description:**"Confined Space" warning sign. There is a yellow steel post at each of its four corners. The

reinforced concrete septic tank is 8 ft 4 in (2.5 m) deep with a 25-person capacity (35 gal [130 L]

per capita) and an average detention period of 24 hr. Its walls are 8 in (20 cm) thick and its floor is 6 in (15 cm) thick. The tile drain field is 4 in (10 cm) vitrified pipe, concrete pipe or drain tile with a minimum of 8 linear ft (2.4 m) per capita. The laterals are open-jointed and spaced 8 ft (2.4 m) apart. This system is active.

This system includes the feed pipeline from the 183-B Filter House, the septic tank, and the drain field.

Waste Type: Sanitary Sewage

Waste This unit receives 35 gal/day (130 L/day) of sanitary sewage from the 182-B Pump Station and cooling water and leakage from pumps located in the 182-B facility. It also received sewage

from 183-B Headhouse, which was decommissioned in 1987.

Site Code: 1607-B7 Classification: Accepted

Site Names: 1607-B7, 1607-B7 Septic Tank System, ReClassification: Interim Closed Out (7/27/2003)

1607-B7 Sanitary Sewer System, 124-C-1

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1969

Site The site has been remediated and closed out.

Description:

The site consisted of a septic tank and drain field. The tank was constructed of reinforced concrete with a brick manhole access. The drain field was located due east of the tank.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from 183-B Water Treatment Plant.

Description:

Site Code: 116-C-1 Classification: Accepted

Site Names: 116-C-1, 107-C Liquid Waste Disposal ReClassification: Interim Closed Out (1/21/1999)

Trench

Site Type: Trench Start Date: 1952
Site Status: Inactive End Date: 1968

Site Status: Inactive End Date: 1968

Site This site has been closed out after remediation. It has been backfilled and revegetated. The **Description:** revegetation included a text plot to determine the need for additional topsoil and irrigation on

remediated waste sites.

The 116-C-1 site was constructed in 1952 and is located northeast of the 116-C-5 Retention Basin facility, approximately 253 m (830 ft) from the 100-year flood level of the Columbia River.

Waste Type: Process Effluent

Waste The site received effluent overflow from 116-C-5 (107-C Retention Basin) during reactor outages due to ruptured fuel elements. Beginning in 1955, this site also served 116-B-11 (107-B

Retention Basin). The trench was used in 1967 for an infiltration test in which the total cooling water volume from B-Reactor was disposed in the trench. During the test, an estimated 4.4E+10 liters (1.17E+10 gallons) of effluent water were released. From process knowledge, the waste site contaminants of concern (COCs) identified are: Americium-241, Cobalt-60, Cesium-137,

Europium-152, -154, -155, Nickel-63, Plutonium-238, -239/240, Strontium-90, Uranium-238, Total Chromium, Hexavalent chromium, Mercury, and Lead.

Site Code: 116-C-5 Classification: Accepted

Site Names: 116-C-5, 116-C-5 Retention Basins, 107-C ReClassification: Interim Closed Out (12/8/1999)

Retention Basins

Site Type:Retention BasinStart Date:1952Site Status:InactiveEnd Date:1969

Site The site has been remediated, backfilled, and revegetated.

Description:

Waste Type: Process Effluent

Waste The basins received cooling water effluent from the 105-B and 105-C Reactors for radioactive decays and thermal cooling prior to release to the Columbia River. The total radionuclide

inventories in the vicinity of the basins ranged from 5 to over 400 curies. Eighty percent of the total radionuclide inventory is contained within the soil adjacent to the basins. Approximately

10 curies leached into the basins' floors and walls.

Site Code: 132-C-2 Classification: Accepted

Site Names: 132-C-2, 1904-C Outfall, 116-C-4 ReClassification: Interim Closed Out (7/25/2002)

Site Type:OutfallStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

Waste Type: Process Effluent

Waste

Description:

Site Code: 600-34 Classification: Accepted

Site Names: 600-34, 100-B Baled Tumbleweed **ReClassification:** Rejected (9/9/1997)

Disposal Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is a dumping area used for disposal of miscellaneous waste. The dumping area is within

Description: a borrow or gravel pit which is 3.0 to 4.6 meters (10 to 15 feet) deep.

Waste Type: Misc. Trash and Debris

Waste The main concentration of waste is located in the eastern section of the pit. However, there is minor surface rubble spread over the pit floor. Visible wastes include wood (timbers and ties),

piles of a silt-like material, sheet metal, cardboard, roofing material, concrete, electrical insulators, and a 10 liter (5 gallon) plastic bucket (090-NRC Paragon Molding Co. Melrose Park,Ill.). Pre-Hanford waste is also evident including barbed wire, what appears to be old farm equipment, and remnants of wire wrapped wooden irrigation pipe. Bales of tumbleweeds were

located at the site in 1992, but have since been removed.

Site Code: 600-56 Classification: Accepted

Site Names: 600-56, Pre-Hanford Farm Site, ReClassification: Rejected (9/9/1997)

Undocumented Solid Waste Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is the abandoned waste from what appears to be a pre-MED (Manhattan Engineering **Description:** District) farm. The site is identifiable by scattered debris, piles of rocks, and an excavated pit.

Waste Type: Misc. Trash and Debris

Waste Miscellaneous waste at the site included wood, metal buckets, cans, and wire fencing.

Description:

Waste Type: Batteries

Waste Description:

Several aging dry cell batteries were found at the site. In September 1997, a field visit was performed by B. D. Schilperoort. He examined the batteries and noted that they appeared to have been in a fire. Some material was removed from the inside of a battery surrounding a carbon electrode. A 50/50 test for corrosivity found neutral pH. A lead test swab found no evidence of lead. The conclusion based on the field investigation was that no hazardous constituents remained in the batteries.

Site Code: 600-67 Classification: Accepted

Site Names: 600-67, Bruggemann's Fruit Storage ReClassification: Rejected (2/6/2001)

Warehouse

Site Type:StorageStart Date:1922Site Status:InactiveEnd Date:1943

Site Description:

The Bruggemann's Warehouse site is the remaining single story warehouse, associated foundations, piping, and debris surrounding the site. During 1998 and 2000 field visits, an abandoned fuel tank was identified adjacent to the warehouse. The tank has a 0.6 meter (2 foot) filler pipe showing above ground. All other pipes seen in the area could be attributed to the facility water system.

The building is considered culturally significant because of its good condition and use of native materials for construction. It is in the process (as of January 2001) for listing on the National Register of Historic Places.

The main warehouse construction consists of local cobblestones in a concrete matrix. An extension of similar construction is present on the south end; it is unknown if this is original to the building or a later addition. The long axis of the warehouse runs north-south. The horizontal wood sheathing of the gable roof is still present on the rafters. On the southeast corner, however, the roof has caved in. Small nails in the roof sheathing indicate that shingles were probably present at one time. The roof overhangs the east and west walls. A cobblestone chimney emerges from the crest of the gable near the south end of the roof. On the west elevation, there is a distinct straight line of cobbles running along the length of the wall about 3 feet (0.9 meters) above grade. A wooden door with a wood frame is in the center of the elevation. On the south edge of the doorway is a wooden plank off its hinges that looks like a garage door. The doors are orange with

dark brown decorative trim and each bears two wood frame windows. The north half of this wall has a distinctly straight line of cobbles about 2 feet (0.6 meters) above grade, similar to the west and north walls. On the south wall of the warehouse, there is a wood frame doorway just east of center. The cobblestone extension at the south end of the warehouse is missing its roof. Above most of the structure's doors and windows, the cobblestones are arranged to form decorative arches. The east wall appears to be the main entrance. On all four corners of the building and in the center of the east wall, decorative columns taper diagonally from the ground to the top of the wall, There is a wood frame doorway near the south end. A tall wood frame window south of the door, and two similar windows are north of the door. On the west wall is a single window. The north wall of the extension faces the warehouse, and there is approximately 1 meter (3 feet) between the two walls. In the center of the wall is a doorway with a small square window east of it. A large pile of cobbles lies outside the chain link fence south of the extension.

Foundations to the east of the warehouse show other facilities related to fruit packing. A possible fruit washing facility shows evidence of two parallel tables with troughs underneath for draining. Also east of the warehouse is a round concrete foundation with heavy steel eyebolts, presumably to support a tank for pressurized water.

Waste Type: Misc. Trash and Debris

Waste Farm debris was observed around the site including fence posts, pipe, food tins, buckets, farm

Description: machinery parts, barbed wire, and wire.

Waste Type: Storage Tank

Waste The underground storage tank was used for storing fuel. Approximately 5 centimeters (1.97

Description: inches) of water and fuel residue remained in the bottom of the tank in February 1998 and

September 2000.

Site Code: 600-230 Classification: Accepted

Site Names: 600-230, RCRA General Inspection **ReClassification:**

200WFY97 Item #4 Historic Disposal Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site contains several old rusty food cans, paint cans, two buckets, an empty 5 gallon steel

Description: container, a metal bowl, and one C cell battery.

Waste Type: Batteries

Waste One C cell battery was found.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste Empty food cans, paint cans, buckets and glass.

Description:

Site Code: 600-231 Classification: Rejected (5/31/2001)

Site Names: 600-231, RCRA General Inspection ReClassification: 200WFY97 Item #5 Historic Disposal Site

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The site contains pre-Hanford debris, including several rusty metal food containers, empty paint cans, buckets, glass, small pieces of concrete, cable, barbed wire, sheet metal, and a rubber tire.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The debris is buckets, cans and wire.

Description:

Waste Type: Misc. Trash and Debris

Waste Small pieces of concrete, a rubber tire and glass.

Description:

Site Code: 600-253 Classification: Rejected (2/6/2001)

Site Names: 600-253, Gravel Pit #24, Pit 24 **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Active End Date:

Site Description:

Gravel Pit #24 is a large excavated area that is actively used as a source of gravel and sand material. Because the bottom of the pit reached groundwater, a wetland was deliberately created in 1999 by excavating a little deeper and contouring the bottom to form islands and different depths of water.

The pit was expanded to the west in 2000 as a source of additional backfill for remedial actions in the $100\,\mathrm{B}$ Area.

Site Code: 600-264 Classification: Accepted

Site Names: 600-264, Abandoned Oil Drum ReClassification: Rejected (6/28/2001)

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1943

Site When discovered, the 55 gallon drum was laying on its side, surrounded by orchard smudge pots.

Description: The drum was inside a recently erected "Caution" tape barrier. No soil discoloration was noted

The drum was inside a recently erected "Caution" tape barrier. No soil discoloration was noted in March 2000, but according to Ron Del Mar, who made the report when the drum was removed

(April 18, 2000), there had been past spills to the ground from the drum. A field visit in September 2000 showed a small area of old, hardened oil-soaked ground. This oiled area was removed in June 2001. Two other drums were nearby, one to the south and one to the north.

Both of these drums were empty and neither showed discolored soil underneath.

Waste Type: Oil

Waste The oil remaining has hardened on the ground surface.

Description:

100-BC-2

Site Code: 100-B-1 Classification: Accepted

Site Names: 100-B-1, Surface Chemical and Solid **ReClassification:**

Waste Dumping Area, Laydown Yard

Site Type:Inert/Demolition LandfillStart Date:Site Status:InactiveEnd Date:

Site The site is an old laydown yard and adjacent dumping area. Miscellaneous debris is scattered in

Description: the southern area of the site. There are many areas of vegetation stress and the soil appears to be

discolored by oil.

Waste Type: Misc. Trash and Debris

Waste The solid waste at the site consists of miscellaneous debris such as wooden power poles, lighting

Description: fixtures, coils of wire, broken glass, small amounts of broken transite, a bottle of hand cream,

and four 20-centimeter (8-inch) Plexiglas filter columns.

Waste Type: Oil

Waste Petroleum contaminated soil was also noted and verified with field screening tests. Areas of soil

Description: appear to be discolored by oil. A field screening test on the soil with ENSYS Petro and

Polyaromatic Hydrocarbons (PAH) kits indicated petroleum contamination. The Petro results

were greater than 10 parts per million and less 100 parts per million total petroleum

hydrocarbons (TPH). The PAH results were greater than 1 part per million and less than 10

parts per million polyaromatic hydrocarbons.

Site Code: 118-B-1 Classification: Accepted

Site Names: 118-B-1, 105-B Burial Ground, 105-B **ReClassification:**

Solid Waste Burial Ground, Operations, Solid Waste Burial Ground, 108-B Burial

Ground, Ext. to BG No. 1

Site Type:Burial GroundStart Date:1944Site Status:InactiveEnd Date:1973

Site This unit currently appears as a vegetation-free mound of cobbles raised 0.6 to 0.9 meters (2 to 3 **Description:** feet) above the surrounding terrain. Permanent concrete markers surround the site, and "Caution"

feet) above the surrounding terrain. Permanent concrete markers surround the site, and "Caution: Underground Radioactive Material" signs are posted. Blue and green ground penetrating radar survey stakes have been placed around the perimeter and in lines crossing the site. A 12 by 4.6-meter (40 by 15-foot), vegetation-free, cobble-covered portion about 46 meters (50 yards) north of the southeast corner is bounded by steel posts and light-duty barricade chain; warning signs are posted on that section. A 12 by 60-meter (40 by 200-foot) vegetation-covered extension near the northwest corner of the main burial ground, is raised 0.9 to 1.2 meters (3 to 4 feet) above the

surrounding terrain. Part of the site is also bounded by permanent yellow markers.

Waste Type: Equipment

Waste The burial ground received general reactor waste from the 100B and 100N reactors, including

Description: the following: aluminum tubes, irradiated facilities, thermocouples, vertical and horizontal aluminum thimbles, stainless steel gun barrels, wastes from operation of the P-10 tritium

separation project, and expendables such as plastic, wood, and cardboard. Waste materials were

typically buried 6.1 meters (20 feet) below grade and were covered with a minimum of 1.2 meters (4 feet) of clean soil; actual soil cover ranged from 0.6 meter (2 feet) to greater than 4.3 meters (14 feet). Potential Contaminants include Ag-108m, C-14, Co-60, Cs-137, Eu-152, Eu-154, Eu-155, H-3, Ni-59, Ni-63, Sr-90, cadmium, Cr+6, lead, mercury, boron, graphite, PCBs, SVOAs, TPH, and VOAs.

Site Code: 118-B-2 Classification: Accepted

Site Names: 118-B-2, Construction Burial Ground No. **ReClassification:**

1, Minor Construction Burial, Ground No. 1

Site Type:Burial GroundStart Date:1952Site Status:InactiveEnd Date:1956

Site The unit is a burial ground containing a trench that runs east and west. Operation of the unit

Description: began in 1952 and ended in the Summer of 1956.

Waste Type: Construction Debris

Waste The unit was used for disposal of 100 cubic meters (131 cubic yards) of dry waste from the 107-

Description: B Basin repairs and waste from the 115-B Gas Recirculation Facility alterations. Potential

Contaminants are: Co-60, Cs-137, Eu-152, Eu-154, Eu-155, Sr-90, chromium, Cr+6, lead,

mercury, PCBs

Site Code: 118-B-3 Classification: Accepted

Site Names: 118-B-3, Construction Burial Ground No. 2 ReClassification:

Site Type: Burial Ground Start Date: 1956
Site Status: Inactive End Date: 1960

Site The unit contains many trenches running east and west.

Description:

Waste Type: Construction Debris

Waste The unit was used for the disposal of solid waste from the effluent line modification and for **Description:** disposal of reactor-generated solid waste during various modification programs. Potential

contaminates include: Co-60, Cs-137, Eu-152, Eu-154, Eu-155, Ni-63, Pu-238, Pu-239/240, Sr-

90, chromium, lead, mercury, PCBs

Site Code: 118-B-4 Classification: Accepted

Site Names: 118-B-4, 105-B Spacer Burial Ground, 105- ReClassification:

B Dummy Burial Ground

Site Type:Burial GroundStart Date:1956Site Status:InactiveEnd Date:1958

The site is covered by about 1 meter (2 to 4 feet) of cobble.

Description:

Waste Type: Equipment

Waste The unit was used for disposal of fuel spacers dummies. Potential contaminants include: Co-60,

Description: Cr+6

Site Code: 118-B-6 Classification: Accepted

Site Names: 118-B-6, 108-B Solid Waste Burial ReClassification:

Ground, 108-B Solid Waste Burial Ground,

No. 2

Site Type:Burial GroundStart Date:1950Site Status:InactiveEnd Date:1953

Site The unit consists of two concrete pipes 5.5 meters (18 feet) long by 1.8 meters (6 feet) in **Description:** diameter, that were buried vertically in the ground. The pipes were capped by a concrete pipes 5.5 meters (18 feet) long by 1.8 meters (6 feet) in diameter, that were buried vertically in the ground.

diameter, that were buried vertically in the ground. The pipes were capped by a concrete pad, measuring about 4.6 by 3.0 meters (15 by 10 feet) with two pear-shaped steel lids that provided access to the burial chambers. All that remains is a section of concrete foundation with two teardrop-shaped steel plates approximately 51 to 66 centimeters (20 to 26 inches) in diameter.

Waste Type: Equipment

Waste The unit received the following types and amounts of wastes: 26,500 kilograms (58,500 pounds) of spent lithium-aluminum alloy, 21,300 kilograms (47,000 pounds) of lead from pots, 45

of spent lithium-aluminum alloy, 21,300 kilograms (47,000 pounds) of lead from pots, 45 kilograms (100 pounds) of mercury from manometers and Toepler pumps, 1,720 kilograms (3,800 pounds) of aluminum cladding, and 1,360 kilograms (3,000 pounds) of palladium.

Additionally, it contains a total of 21,200 kilograms (23.4 tons) of wastes generated as a result of the P-10 tritium production project in the 108-B Facility. Potential contaminants include: H-3,

lead, mercury

Site Code: 1607-B8 Classification: Accepted

Site Names: 1607-B8, 1607-B8 Septic Tank System, ReClassification: Interim Closed Out (7/29/2003)

124-C-2, 1607-B8 Sanitary Sewer System, Septic Tank & Disposal Field for 190-C

Pumphouse

Site Type:Septic TankStart Date:1951Site Status:InactiveEnd Date:1969

Site The site has been remediated and closed out.

Description:

The site consisted of a septic tank and tile field. The vertical tank was constructed of steel and had a 1,325-liter (350-gallon) capacity. The tile field was oriented north-south and was located to the south of the septic tank. The tile field was constructed of 20-centimeter (8-inch) vitrified clay

pipe laid with open joints.

Waste Type: Sanitary Sewage

Waste This unit received an unknown quantity of sanitary sewage from the 190-C Pumphouse.

Description:

Site Code: 1607-B9 Classification: Accepted

Site Names: 1607-B9, 1607-B9 Septic Tank System, ReClassification: Interim Closed Out (8/28/2003)

1607-B9 Sanitary Sewer System, 124-C-3

Site Type: Septic Tank Start Date:

Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was a septic tank and tile field.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from the 105-C Reactor Building.

Description:

Site Code: 1607-B10 Classification: Accepted

Site Names: 1607-B10, 1607-B10 Septic Tank System, ReClassification: Interim Closed Out (7/29/2003)

Sewage Disposal Field

Site Type:Septic TankStart Date:1952Site Status:InactiveEnd Date:1969

Site The site has been remediated and closed out.

Description:

The site consisted of a septic tank and tile field. A steel pipe riser 20 centimeters (8 inches) in diameter and 84 centimeters (33 inches) above grade marked the location of the tank.

Waste Type: Sanitary Sewage

Waste The unit received only sanitary sewer wastes from the headhouse of the 183-C Water Treatment

Description: Plant. There were no known discharges of hazardous chemicals or radionuclides.

Site Code: 1607-B11 Classification: Accepted

Site Names: 1607-B11, 1607-B11 Septic Tank System ReClassification: Interim Closed Out (7/29/2003)

Site Type:Septic TankStart Date:1952Site Status:InactiveEnd Date:1969

Site The site has been remediated and closed out.

Description:

The site consisted of a septic tank and drain field.

Waste Type: Sanitary Sewage

Waste There were no known discharges of hazardous chemicals or radionuclides into the unit. The unit

Description: received only sanitary sewer wastes from the 183-C Filter Building & Pump Room (183-C

Water Treatment Plant).

Site Code: 100-C-2 Classification: Rejected (9/9/1997)

Site Names: 100-C-2, Possible Building Foundation and **ReClassification:**

Parking Lot, Monitoring Station 1614-B-1

Site Type: Foundation Start Date:
Site Status: Inactive End Date:

Site Description:

The site is a small square concrete slab and nearby gravel parking area. Northwest of the slab is a gravel road with a gravel area on the other side. A few small pieces of asbestos transite, a few drycell batteries, and some steel anchoring cable were noted around the site during a 9/13/94 field investigation by Kathryn J. Moss.

Site Code: 100-C-3 Classification: Accepted

Site Names: 100-C-3, 119-C Sample Building French ReClassification: Interim Closed Out (7/28/2003)

Drain, 119-C French Drain

Site Type: French Drain Start Date: 1960

Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

Waste Type: Water

Waste The 119-C Sample Building was built in 1960 and contained "water cooled" air sample

Description: monitoring equipment. Effluent from the sampling equipment, the building's swamp cooler, and

janitorial waste would have been disposed to this drain.

Site Code: 100-C-4 Classification: Rejected (9/9/1997)

Site Names: 100-C-4, Export Water Line Valve Pit **ReClassification:**

Site Type:Valve PitStart Date:Site Status:ActiveEnd Date:

Site The site is a valve pit located along the export water line. The pit is marked with post and chain.

Description: The 1.8 by 1.8 meter (6 by 6 foot) wooden cover is caving into the valve pit. The cover is posted

with a "Danger: Cave-In Potential" sign.

Site Code: 100-C-5 Classification: Rejected (4/11/2002)

Site Names: 100-C-5, 100-C Service Water Pipelines, **ReClassification:**

100-C Clean Water Pipelines

Site Type: Product Piping Start Date: 1952
Site Status: Inactive End Date: 1969

Site The site encompasses the clean water upstream pipelines for the 100-C Area, including

Description: underground pipelines used to transport raw, fire, export, and sanitary water from the river

pumphouse, to the water treatment facilities and to 100-C Area facilities and fire hydrants. Lines within buildings, process and septic sewer pipes, pipes that carried water treated with sodium dichromate, and all lines that are downstream from the reactor building, i.e., those lines that carry

cooling water from the reactor to the retention basin, trench, and/or the river are excluded.

Waste Type: Water

Waste Only uncontaminated piping remains.

Description:

Site Code: 100-C-6 Classification: Accepted

Site Names: 100-C-6, 100-C Reactor Cooling Water **ReClassification:**

Effluent Underground Pipelines (3 Subsites)

Site Type:Radioactive Process SewerStart Date:1952Site Status:InactiveEnd Date:1969

The site includes the underground 105-C Reactor cooling water effluent pipelines. These include those effluent pipelines that transported 105-C Reactor cooling water from the reactor to the 116-

C-5 (107-C Retention Basin), and from the basin to the 132-B-6 and 132-C-2 Outfall Structures and/or to the 116-C-1 Liquid Waste Disposal Trench. This waste site includes all associated expansion and valve boxes and excludes the retention basin (separate site), outfall structures (separate sites), and those effluent pipelines that are within the confines of the 105-C Reactor Building or that run from the outfall structures to the bottom of the river. It also excludes all

reactor influent pipelines that are upstream of the reactor building.

Waste Type: Process Effluent

Waste Description:

The waste is contaminated steel piping, concrete, and soil. Reactor cooling water became radioactively contaminated as it passed through the reactor core. Activation products created in the water included calcium-41, chromium-51, and zinc-65. Activation products from the reactor core that were picked up and transported by the cooling water included tritium, carbon-14, cobalt-60, nickel-63, and europium-152/154/155. Fuel element fission products such as strontium-90, and cesium-137, as well as transuranics such as plutonium-239/240 were introduced into cooling water due to fuel cladding failures. Concentrations of radionuclides in cooling water during normal reactor operations were approximately (0.2 microcuries/liter). Concentrations of radionuclides have built up in rust flakes and scale on the inner surfaces of the pipelines and in sludge in the diversion and junction boxes. Average beta-gamma concentrations for the effluent line scale and junction/diversion boxes are 83,000 and 120,000 picocuries/liter, respectively. Average plutonium-239/240 concentrations are 66 picocuries/gram for the effluent line scale and 720 picocuries/gram for the sludge at the bottom of the diversion and junction boxes. Direct readings of the bottom of the effluent lines averaged approximately 40,000 counts/minute with a Geiger-Mueller probe. Additional chemicals were added to the effluent for purposes of water treatment. These included aluminum sulfate (alum), with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter. The waste is any remaining process effluent and the contaminated pipelines.

SubSites:

SubSite Code: 100-C-6:1

SubSite Name: 100-C-6:1, 100-C Area South Effluent Pipelines

Classification: Accepted

ReClassification:

Description: This subsite includes the underground reactor effluent pipelines surrounding the 105-B

Reactor to within 1.5 meters (5 feet) of the reactor foundation, and running north from the

reactor to B Avenue.

SubSite Code: 100-C-6:2

SubSite Name: 100-C-6:2, 100-C Area North Effluent Pipelines

Classification: Accepted

ReClassification:

This subsite includes the 105-C Reactor effluent pipelines from B Avenue north to the 116-C-**Description:**

5 Retention Basins, and includes the diversion box just south of the Retention Basins.

100-C-6:3 **SubSite Code:**

SubSite Name: 100-C-6:3, 100-C Retention Basin to Outfalls Effluent Pipelines

Classification: Accepted

ReClassification:

This subsite includes the 105-C underground effluent pipelines that run between the 116-C-5 **Description:**

Retention Basin, 116-C-1 Trench, 132-B-6 Outfall, and 132-C-2 Outfall, and between the 116-B-11 and 116-B-1 Trenches. The River Pipelines running from the outfalls to the bottom of

the river are site 100-B-15.

Several of the pipelines in this subsite were removed with the remedial action at 116-C-5. Those shown within the excavation/cleanup verification sampling footprint of 116-C-5 have been closed out with that subsite. Other sections that have been removed will be sampled for cleanup verification with this subsite. These sections are the westernmost pipeline from the western basin to the junction box south of 116-C-5 (where the cross-tie pipeline from 100-B-8 joins), and the pipeline on the north side of 116-C-5 that runs from the western basin to the

junction box immediately north of the eastern basin. (See WIDS photo)

Site Code: 100-C-7 Accepted Classification:

Site Names: 100-C-7, 183-C Filter Building /Pumproom **ReClassification:**

Facility Foundation and Demolition Waste

Site Type: Dumping Area Start Date: Site Status: End Date: Inactive

The site has been backfilled and graded to match the surrounding terrain. No trace of the 183-C Site

Filter Building/Pumproom was identified. **Description:**

> Another area of yellow stained soil has been observed near the sedimentation basins. Information about this area has been added as a subsite. The area has a chain around it with a 'Danger

Authorized Personnel Only' sign.

Waste Type: Chemicals

The concrete foundation located in the 183-C Pumproom is contaminated with sodium Waste **Description:**

dichromate. Characterization data showed the contamination at the worst location to be 20

centimeters (8 inches) deep, half the thickness of the floor. Therefore, assuming the

contamination averaged a depth of 15 centimeters (6 inches) throughout and covered a total area of 93 square meters (1000 square feet), a quantity of 14 cubic meters (500 cubic feet) was

calculated.

Waste Type: **Demolition and Inert Waste**

The 183-C Filter Building foundation and clearwells were filled with demolition and inert waste Waste

Description: materials and leveled to grade.

Asbestos (friable) Waste Type:

Waste Description:

An underground asbestos wrapped steam line was encountered during the foundation demolition along the north clearwell. Due to the length and location of the steam line, the small area uncovered during the excavation work was not remediated. The pipe was wrapped in plastic, marked with "DANGER ASBESTOS HAZARD" tape, and covered again with soil.

SubSites:

SubSite Code: 100-C-7:1

SubSite Name: 100-C-7:1, Yellow Stained Soil/183-C Water Treatment Facility Head House

Classification: Accepted

ReClassification:

Description: The stained soil was observed in early April 2002. It is located north of the 183-C Head

House and adjacent to the northwest corner of the 183-C Sedimentation Basins. Discussions with project personnel concerning the past use of this area indicate that the appearance of the

stain is consistent with sodium dichromate.

It is believed that a railroad spur was used to deliver water treatment supplies to the 183-C Head House. One of these chemicals was sodium dichromate, a corrosion inhibitor, used to treat the reactor cooling water. The Final Decommissioning Report for the 183-C Filter Building/Pumproom Facility (BHI-01005) states that the sodium dichromate was stored, mixed and spilled in various locations throughout the 183-C Pump Room Facility where it was then pumped into the four large exterior tanks and stored for the 190-C Process Pump

House.

It is unclear as to how the Sodium Dichromate was transferred from the Head House, west of the sedimentation basins, to the Pump Room Facility, east of the basins. The stained area may be a result of this transfer process.

be a result of this transfer process

Site Code: 100-C-8 Classification: Accepted

Site Names: 100-C-8, 105C Hydraulic Oil Release ReClassification: Rejected (3/13/2002)

Site Type:Unplanned ReleaseStart Date:1998Site Status:InactiveEnd Date:1998

Site The site is not marked or posted, no visible evidence of the spill remains because the concrete

Description: rubble that it was spilled on has been removed.

Waste Type: Oil

Waste Unocal Unax AW46 Hydraulic Oil, unregulated product.

Description:

Site Code: 100-C-9 Classification: Accepted

Site Names: 100-C-9, 100-C Area Process and Sanitary ReClassification:

Sewer Underground Pipelines

Site Type:Process SewerStart Date:1952Site Status:InactiveEnd Date:1969

Site This site includes the underground process sewers associated with the 105-C Reactor operations.

Description: It also includes the feed pipelines to several septic systems (1607-B8, 1607-B9, 1607-B10) and

the treated water pipelines from the 190-C Pump House to the 105-C Reactor.

The large twin-box process sewer pipeline is constructed of reinforced concrete with two portals measuring 6 ft tall by 4 ft wide. Approximately 3,000 meters of pipeline are associated with the 100-C-9 site; this includes miscellaneous piping that supports the 6-foot (1.8 meter) line. Approximately 2 meters of soil cover the pipeline.

Waste Type: Equipment

Waste Description:

The site is the non-radioactively contaminated process and septic sewer pipelines associated with the 105-C Reactor operations. The 1607-B9 septic system serviced the 105-C Reactor and thus may be radioactively contaminated. Any contamination still associated with these pipelines is expected to be in residual amounts.

Chemical additives to the reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, the free chlorine residual was approximately 0.2 milligrams/liter, and sodium dichromate was added at a rate of about 2 milligrams/liter. (Note: Reference: WHC-SD-EN-TI-169 is for 100-F, and applies equally to 100-C).

Site Code: 116-C-2A Classification: Accepted

Site Names: 116-C-2A, 105-C Pluto Crib, 116-C-2, 105- ReClassification: Interim Closed Out (3/15/2000)

C Crib

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1969

Site This site has been remediated and closed out.

Description:

The pluto crib was constructed of concrete ties that were notched and stacked in a log cabin formation.

Walls of concrete ties were constructed to divide the crib into 12 sections. Spaces between the ties were filled with sand. The crib was covered over by concrete roof slabs. A 20-centimeter (8-inch) well casing extended through the crib and ended 36 meters (118 feet) below grade.

Waste Type: Process Effluent

Waste Description:

This unit was initially used for the disposal of reactor cooling effluent after fuel cladding failures. Unknown additional quantities of contaminated wastes included wash water from the decontamination of dummy fuel elements on the 105-C wash pad, contaminated water received from the 105-C Metal Examination Facility, and liquid wastes received from the 105-C Reactor rear face. Potential contaminants of concern include americium-241, plutonium-238/239/240, cobalt-60, cesium-137 and strontium-90. Reports vary as to the amounts of different chemicals disposed of at the Pluto Crib site. Two reports state that the crib contained 500 kilograms (1,100 pounds) of sodium dichromate, 1,000 kilograms (2,200 pounds) of sodium oxalate, and 1,000 kilograms (2,200 pounds) of sodium sulfamate. Another report, states that the crib contained 990 kilograms (2,180 pounds) of sodium dichromate, 2,100 kilograms (4,630 pounds) of sodium oxalate, and 6,600 kilograms (14,550 pounds) of sodium sulfamate. Sodium hydroxide and nitric acid were also believed to be disposed at the site. The total waste volume is listed as 7.5E+06 liters (1.98E+06 gallons).

Site Code: 116-C-2B Accepted **Classification:**

116-C-2B, 105-C Pluto Crib Pump Station, **ReClassification:** Interim Closed Out (3/15/2000) **Site Names:**

116-C-2-1, 116-C-2B Pump Station

Start Date: 1952 **Site Type: Pump Station Site Status:** Inactive **End Date:** 1969

Site This site has been remediated and closed out.

Description:

This unit was a rectangular shaped, concrete sump. A diamond-plate steel access hole cover was located in the northwest corner, and a vent was located at the east end. The site included all underground pipelines between the 105-C Reactor and the 116-C-2C Sand Filter.

Process Effluent Waste Type:

Waste The unit received waste from the 105-C Reactor and pumped it into the 116-C-2C (105-C Pluto

Description: Crib Sand Filter).

Site Code: 116-C-2C **Classification:** Accepted

116-C-2C, 105-C Pluto Crib Sand Filter, **ReClassification:** Interim Closed Out (3/15/2000) **Site Names:**

116-C-2-2, 116-C-8

Site Type: Sand Filter **Start Date:** 1952 **Site Status:** Inactive **End Date:** 1969

Site This site has been remediated and closed out.

Description:

The structure was an open-bottom concrete box placed in a sand and gravel pit. It was covered with concrete shielding slabs. Contaminated water was spread over the surface of the sand filter media by distribution trays. The site included the underground pipelines from the 105-C Pluto Crib Sand Filter to the 116-C-2A Pluto Crib.

Waste Type: Process Effluent

Waste **Description:** The 105-C Pluto crib sand filter was sampled and surveyed between 2/6/76 and 4/5/76. Based on sample results, the sand filter contains an estimated radioactive inventory of 260 curies (Table 3.4-9, page 3-30) in 90,000 cubic feet of soil (about 6,100,000 Kg). Beta-gamma concentrations in the sand filter averaged 42,000 pCi/g with a maximum value reported of 7,300,000 pCi/g in a sample taken from an inlet distribution tray. Radioactivity in this sample was primarily due to cobalt-60 although high levels of strontium-90 (29,000 pCi/g) and cesium-137 (140,000 pCi/g) were present as well. This sample also contained 1,500 pCi/g plutonium-239/240. The average concentration of plutonium-239/40 in the sand filter was reported to be about 20 pCi/g for the entire mass of potentially contaminated soil column. Sample analyses for the sand filter are presented in Table 3.4-7 (page 3-28) by Dorian and Richards. The site may have received contaminated wastes from the decontamination of dummy fuel elements on the

wash pad. Americium-241 is another potential contaminant of concern.

Site Code: 116-C-3 **Classification:** Accepted

Site Names: 116-C-3, 105-C Chemical Waste Tanks **ReClassification:**

Site Type: Storage Tank **Start Date:** 1964 Site Status: Inactive End Date: 1969

Site Description:

The site consists of two underground storage tanks. The tank area is bounded by 7.6 centimeter (3 inch) yellow steel posts. The site currently appears as a vegetation-free, cobble-covered field; the tanks are below grade and are not visible. Three rusted valve handles, approximately 0.9 meters (3 feet) tall, protrude from the center of the west half of the tank site. A gray 5 centimeter (2 inch) conduit pipe protrudes from the center of the east half of the waste site. This pipe is part of the cathodic protection system that was installed to protect storage tanks against corrosion. Two silver-colored, curved vent pipes approximately 0.6 meters (2 feet) tall emerge from the center of the waste site. The site is posted with a sign identifying it as the "116-C-3 Chemical Waste Tanks". The site includes all underground pipelines between the 116-C-3 (105-C Chemical Waste Tanks) and the 105-C Reactor Building.

Site Code: 116-C-6 Classification: Accepted

Site Names: 116-C-6, 105-C Fuel Storage Basin **ReClassification:**

Cleanout Percolation Pit, 105-C Pond

Site Type: Process Pit Start Date: 1984
Site Status: Inactive End Date: 1985

Site Description:

The site is an unlined, L-shaped open excavated pit. Soil was excavated from the center and used as a berm around its perimeter. It currently is a gravel depression with natural vegetation growing inside the rock berm walls. Four light-duty steel posts section off a 3 by 6-meter (10 by 20-foot) portion of the area inside the berm. The purpose of these posts is unknown. The soil within the berm is reddish-brown. The site is not radiologically posted or marked with any signs.

Waste Type: Water

Waste Description:

This unit received water from the 105-C Fuel Storage Basin cleanout. Before being discharged to the pit, the radiologically contaminated shielding water in the basin was processed through ion exchange columns. Composite samples were taken to ensure that radionuclide concentrations were below release criteria in Table II of DOE Order 5480.1. No known hazardous substances were present in the water; however chemical analysis during that period was not a standard practice, and there is no evidence that any chemical analyses were performed.

Site Code: 118-C-1 Classification: Accepted

Site Names: 118-C-1, 105-C Burial Ground, 105-C ReClassification:

Solid Waste Burial Ground, 118-C-1,

Burial Ground

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1969

Site The site is a burial ground that contains six pits and many trenches running north and south. The **Description:** site boundaries are permanently marked with concrete posts numbered C-70-1 through C-70-20.

Waste Type: Equipment

Waste The unit was used for miscellaneous solid waste from 105-C Building that includes process tubes, aluminum spacers, control rods, soft waste, and reactor hardware. The C Area Land

Burial log (1962-1965) identifies waste as trash, poison splines, dummies, hot laundry, fan

filters, irradiated balls, ceramic samples, thimbles, gun barrels, and hoses.

The Burial Ground ROD reports that estimates of wastes are 86 metric tons (94.8 tons) of boron, 1.1 metric tons (1.2 tons) of graphite, 0.51 metric tons (0.56 tons) of lead, 21.6 metric tons (23.8 tons) of lead/cadmium, and 96 metric tons (105.9 tons) of other materials. Potential contaminates include: Ag-108m, C-14, Co-60, Cs-137, Eu-152, Eu-154, Eu-155, H-3, Ni-59, Ni-63, Sr-90, Ba-133, Ca-41, cadmium, Cr+6, lead, boron, mercury, PCBs, SVOAs, TPH, and VOAs.

Site Code: 118-C-2 Classification: Accepted

Site Names: 118-C-2, 105-C Ball Storage Tank, Ball 3X **ReClassification:**

Storage Tank

Site Type:Storage TankStart Date:1969Site Status:InactiveEnd Date:1969

Description:

Before the 105-C Reactor ISS project was completed, the unit appeared as a 2.1 by 2.1-meter (7 by 7-foot) vegetation-free, cobble-covered mound. It now (2001) is level with the surrounding grade, except for two riser pipes. The site is marked with a sawhorse.

A nearby site, about 30 meters (100 feet) east of the northeast corner of the 105-C Reactor, has been mislabeled with signs reading "118-C-2 Storage." The incorrectly labeled site is believed to be the first junction box on the effluent water line, which is shown on Hanford Site Drawing P-5535.

Waste Type: Equipment

Waste Description:

During Ball 3X project work with a prototype contaminated ball sorter, the tank received highly radioactive, irradiated, nickel-plated boron steel and carbon steel balls for temporary storage so that they would decay radiologically before burial. Approximately 9,070 kilograms (20,000 pounds) of highly activated balls remain in the storage tank. Seventy percent of the balls remaining are boron steel, and thirty percent are carbon steel. A 1987 evaluation of the tank waste estimated that 80 curies of cobalt-60 and 1.6 curies of nickel-63 are present. Potential contaminants include: Co-60, Ni-63, Sr-90, Cs-137, Eu-152, Eu-154, U-238, Pu-238, Pu-239/240, chromium, lead, mercury

Site Code: 118-C-3 Classification: Accepted

Site Names: 118-C-3, 105-C Reactor Building **ReClassification:**

Site Type:ReactorStart Date:1952Site Status:InactiveEnd Date:1969

Site Description:

The original facility consisted of the reactor block, which included the graphite core, biological and thermal shields, pressure tubes, and the safety and control systems. The irradiated fuel storage basin was constructed below grade. The reactor building was constructed with 0.9 to 1.5-meter (3 to 5-foot) thick concrete walls around the reactor core and corrugated asbestos/cement siding upper walls. The original roof construction was reinforced concrete over the inner rod room and the rear face enclosure and poured insulating concrete over the rest of the building. Beginning in 1996, decommissiong activities removed portions of the building, leaving only the reactor core and shield walls. The footprint of the building was reduced from 5,528 square meters

(59,500 square feet) to 1,059 square meters (11,400 square feet).

Waste Type: Equipment

Waste Description:

In 1987, the facility was estimated to contain approximately 25,000 curies of radionuclides, 95,000 kilograms (105 tons) of lead, and 200 cubic meters (7000 cubic feet) of asbestos. During the Interim Safe Storage project, approximately 198 cubic meters (6600 cubic feet) of asbestos was removed along with 500 tons of interior and exterior transite panels. During 1996 through 1998, the total estimated inventory of lead was increased to 203 tons. Seventy tons of lead was removed. Material that was radioactively contaminated was take to the Environmental Restoration Disposal Facility (ERDF).

SubSites:

SubSite Code: 118-C-3:1

SubSite Name: 118-C-3:1, 105-C Reactor Core and ISS Project

Classification: Accepted

ReClassification:

Description: The original footprint of the facility was reduced by 81% during the Interim Safe Storage

project. The original facility covered an area of 5,528 square meters (59,500 square feet).

The final footprint covers an area of 1,059 square meters (11,400 square feet).

SubSite Code: 118-C-3:2

SubSite Name: 118-C-3:2, 105-C Reactor Building Below-Grade Structures and Underlying Soils

Classification: Accepted

ReClassification: Closed Out

Description: The remedial action involved the decommissioning and decontamination of associated

structures and soils at the 105-C Reactor to the extent required leaving only the reactor core to be placed in Interim Safe Storage status. Remediation included the removal of hazardous and radiologically contaminated material from below grade rooms, tunnels and contaminated soils. Contaminated material was disposed of in the Environmental Restoration Disposal Facility (ERDF). The excavated areas were backfilled to grade with clean material.

Site Code: 118-C-4 Classification: Accepted

Site Names: 118-C-4, 105-C Horizontal Control Rod ReClassification: Interim Closed Out (9/11/2003)

Storage Cave

Site Type:StorageStart Date:1950Site Status:InactiveEnd Date:1969

Site The site has been remediated.

Description:

The site consisted of two steel-plate tunnels covered with 1.2-meters (4-foot) of soil, gravel and asphalt emulsion. The two tunnels were grouted onto a concrete floor that had three equally spaced 0.6-meter (2-foot) diameter by 0.6-meter (2-feet) deep french drains beneath the centerline of the long axis of the structure. The french drains removed water runoff that could collect

between the tunnels in the earth shielding.

Waste Type: Equipment

Waste The tunnel was used for temporary storage for radioactive decay pending subsequent disposal. **Description:** Some miscellaneous components are currently in the rod cave. The radiation reading at the

entrance to the tunnel with the door open was once documented to be 5 millirads/hour.

Site Code: 124-C-4 **Classification:** Rejected (9/9/1997)

Site Names: 124-C-4, Sanitary Waste Site **ReClassification:**

Sanitary Sewer **Start Date: Site Type: Site Status:** Inactive **End Date:**

This site was assigned by Bill Hayward based on the information from BHI D&D in the 1995 Site

RARA Summary Report. D&D could not identify the site location nor could the BHI historian. **Description:** The site is thought to be either 1607-B10 or 1607-B11 as they are the only remaining septic

systems in the 100B Area that have a 124 alias assigned to them. If a determination can be made that it is one of above referenced septic systems, the 124-C-4 will be added to the site as an alias.

This site reference (as a separate site) will then be removed from the database.

128-C-1 **Classification:** Accepted **Site Code:**

Site Names: 128-C-1, 100-C Burning Pit ReClassification:

Site Type: Burn Pit **Start Date: Site Status: End Date:** Inactive

Site **Description:** This unit is a vegetation and ash-covered field strewn with pieces of green, clear, and bright blue glass; small glass bottles; metallic wastes such as rusted cans, auto parts and assorted scrap metal; chunks of concrete; and pieces of asbestos transite. The site is bounded on the north by the export water line and on the east by a soil berm. Large rocks and chunks of concrete are located to the east of the berm. The south side of the burning pit is approximately 69 meters (75 yards) from the railroad tracks. A gravel and vegetation-covered roadway leads from the old perimeter road to the burning pit. Two yellow and black-striped barricade posts are located on either side of the roadway, near its end. Two 2.1-meter (7-foot) yellow poles are located just past and to the left of the barricade poles.

Waste Type: Misc. Trash and Debris

The burning pit received combustible materials such as office wastes, paint wastes, vegetation, Waste

and chemical solvents. Large metal items such as hardware, machinery, and other **Description:**

noncontaminated equipment were also deposited at the site.

Site Code: 132-C-1 Classification: Accepted

132-C-1, 116-C Reactor Exhaust Stack **ReClassification:** No Action (9/11/2003) **Site Names:**

Site, 105-C Reactor Stack Site,

Site Type: Burial Ground Start Date: 1952 **Site Status:** Inactive **End Date:** 1969

The site has been reclassified to "No Action". Site

Description:

This site was a burial area that contained rubble from the 105-C Reactor Stack, also known as the 116-C Reactor Exhaust Stack. The reactor stack was 5.1 meters (16.6 feet) in diameter and 61 meters (200 feet) high. It operated from 1952 through 1969, exhausting confinement air from the work areas in the reactor. The site currently appears as a vegetation-free, cobble-covered field

adjacent to the 100-C Reactor. There are no markings or posts to identify it.

Waste Type: Demolition and Inert Waste -JP--

Waste **Description:** Sampling of the stack inlet was performed in 1976, using standard smear techniques. Low-level beta and gamma radiation was detected in the stack. It was estimated that the interior of the unit contained approximately 2.8 millicuries of radioactive materials. At the time of demolition (1983), the interior of the reactor stack contained approximately 2 millicuries of radioactive materials

Site Code: 132-C-3 **Classification:** Accepted

ReClassification: No Action (9/11/2003) **Site Names:** 132-C-3, 117-C Filter Building

Site Type: Process Unit/Plant **Start Date:** 1961 **Site Status:** Inactive **End Date:** 1969

Site The site has been evaluated and reclassified to "No Action".

Description:

The site now resembles a gravel parking lot.

Waste Type: Demolition and Inert Waste

Waste **Description:** Total radionuclide inventory in this unit is estimated to be 0.84 millicuries. The radionuclides comprising this inventory are tritium, carbon-14, cobalt-60, cesium-137, strontium-90, europium-154, plutonium-152, and plutonium-239/240. Of these radionuclides, strontium-90 is the most restrictive in the Allowable Residual Contamination Level (ARCL) calculations calculations.

Site Code: 600-33 **Classification:** Accepted

Site Names: 600-33, 105-C Reactor Test Loop Burial **ReClassification:**

Site

Site Type: Burial Ground Start Date: 1963 **Site Status: End Date:** 1963 Inactive

The unit consists of a burial ground for a discarded radioactive test loop. Site

Description:

Waste Type: Equipment

The waste consists of a radioactive double-tube test loop, contaminated carbon-steel shielding Waste **Description:** pipe, and about 305 meters (1,000 feet) of cable used to remove the test loop from the 105-C

Reactor. The test loop is approximately 5.5 to 6.1 meters (18 to 20 feet) long and consists of various sizes of stainless steel tubing. The test loop may have dose rates in excess of 100

rads/hour. Potential contaminants include: Co-60, Ni-63

Site Code: 600-232 **Classification:** Accepted

600-232, 100B Electrical Laydown Area **Site Names: ReClassification:**

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

Description:

The site has several utility poles in various conditions ranging from poor to good. Several of the poles have had the treated wood butt ends cut off and are stored nearby. The site also contains various electrical utility materials such as steel cable, aluminum high voltage wire, aluminum beams, aluminum poles and insulators. The site also contains several utility pole storage racks

constructed of railroad rails and ties. A few pieces of tar were also observed in the area.

Waste Type: Equipment

Waste The treated wood

The treated wood ends of the utility poles are categorized as dangerous waste.

Description:

Waste Type: Equipment

Waste Description:

The aluminum wire beams and poles are potentially recyclable.

Waste Type: Chemicals

Waste Tar

Description:

Site Code: 600-233 Classification: Rejected (3/27/2002)

Site Names: 600-233, Vertical Pipe Near 100B ReClassification:

Electrical Laydown Area

Site Type: Storage Tank Start Date:
Site Status: Inactive End Date:

Site The pipes are adjacent to an abandoned railroad track and the old electrical facility laydown area, southeast of the 100-BC exclusion fence. The area has revegetated to grasses and native shrubs.

The steel pipe is 6.4 centimeters (2.5 inches) in diameter extending 1.7 meters (4.92 feet) vertically from the ground surface with an elbow and valve at the top. A second 1.9 centimeter (0.75 inch) diameter pipe is approximately 20 meters (65.6 feet) east of the 6.4 centimeter (2.5

inch) pipe.

Waste Type: Equipment

Waste Steel pipe.

Description:

Site Type:

Site Code: 600-252 Classification: Rejected (2/6/2001)

Site Names: 600-252, Old Tank from RCRA General **ReClassification:**

Inspection #LORIVFY97 Item #8

Dumping Area Start Date:

Site Status: Inactive End Date:

Site The site is an old, rusty, corrugated steel tank laying on its side. The tank is approximately 2.74 meters (9 feet) long, 0.91 meters (3 feet) in diameter, and has a 25.4 centimeter (10 inch) hole cut

in its side near the bottom, and two short schedule 40 pipes on the side at either end (one pipe at

each end).

This item meets the specific reporting criteria of the inspection as a solid waste disposal site not previously identified for remedial action. During a site inspection on October 8, 1997 the tank was measured to be (8 feet) 2.44 meters long and (3.5 feet) 1.07 meters in diameter with a tape

measure.

Waste Type: Misc. Trash and Debris

Waste Description:

100-DR-1

Site Code: 100-D-1 Classification: Accepted

Site Names: 100-D-1, Contaminated Drain, ReClassification:

Contaminated Storm Drain

Site Type:Process SewerStart Date:Site Status:InactiveEnd Date:

Site The site is covered with a 0.9 by 1.1-meter (3 by 3.5-foot) steel cover and is posted as a

Description: Radiological Contamination Area and as a Confined Space. The site is surrounded with five steel

posts and a chain barricade. The Patrol Road south of the site shows evidence of an area of pavement which was removed and replaced at one time indicating that the site may have been used for drainage for the low area south of the Patrol Road. However, the culvert is not visible on the south side of the road. Drawing H-1-8548-DR also shows a 30.5-centimeter (12-inch) drain pipe in this location. Under the steel plate is a concrete box with inside dimensions of 96.5 by 68.6 meters (38 by 27 inches) with a 30.5-centimeter (12-inch) culvert entering from the south side and running towards the south side of the Patrol Road. On the west side a 23-centimeter (9-inch) pipe runs toward the 1904-D Outfall Structure. The interior of the junction box and pipes

are dry and show no indication of being active.

Waste Type: Process Effluent

Waste Leakage of the nearby retention basins and effluent discharge lines may have accumulated in a **Description:** low area located between the 107-D Retention Basin and the Patrol Road. The area was drained

low area located between the 107-D Retention Basin and the Patrol Road. The area was drained through a culvert which ran under the the Patrol Road to the junction box and then through a 23-

centimeter (9-inch) pipe to the 1904-D Outfall.

Site Code: 100-D-2 Classification: Accepted

Site Names: 100-D-2, Solid Waste Site, Lead Sheeting **ReClassification:**

Site Type:FoundationStart Date:Site Status:InactiveEnd Date:

Site The site appears as a small lead sheet covering a concrete pad. It is not marked or posted.

Description:

Waste Type: Construction Debris

Waste

Description:

Site Code: 100-D-3 Classification: Accepted

Site Names: 100-D-3, Solid Waste Burial Ground, Silica ReClassification:

Gel

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site A recently placed concrete marker with an imbedded brass medallion identifies the site as the 116-

Description: D-2A Pluto Crib. The site appears as a gravel parking lot.

Waste Type: Abandoned Chemicals

Waste Description:

The site contains contaminated silica gel removed from drying towers in the 115-D/DR Building.

Site Code: 100-D-4 Classification: Accepted

Site Names: 100-D-4, Sludge Trench #5, 107-DR ReClassification: Interim Closed Out (3/25/1999)

Sludge Trench #5, 107-D-5, 107-D5

Site Type: Trench Start Date: 1955

Site Status: Inactive End Date:

Site Description:

The 100-D-4 site was constructed in 1953. This pit and two other identified sludge pits were associated with maintenance cleanout of the 116-DR-9 Liquid Effluent Retention Basin, which was constructed in the late 1940s. The 116-DR-9 Liquid Effluent Retention Basin was used to hold reactor effluent water for a brief period of time, allowing radioactive decay and thermal cooling to occur before the water was discharged to the Columbia River. The sludge pits were built for disposal of sludge removed from the bottom of the effluent retention basin to enable periodic maintenance and repairs to the basin during operation of the 100-D and 100-DR Reactors. There is no indication from available records that this sludge pit directly received any regular and/or high-volume liquid effluent wastes.

The sludge pit consisted of an approximately 630-square meter (6,779-square feet) unlined excavation (bottom dimension) with moderately sloped side walls. This pit extended to a depth of about 3 m (10 ft) below grade, and was surrounded by native sandy gravel soils at the base and side walls of the excavation. After shutdown of the 100-D and 100-DR Reactors in the 1970s, subsequent decommissioning of the effluent retention basin and associated sludge pits (as part of the Radiation Area Remedial Action Program) included placement of approximately 2 m (6 ft) of materials within the sludge pit. These materials consisted primarily of soil with some miscellaneous debris from the effluent basin and surrounding area. This sequence of material placement was followed by placement of approximately 1 m (3 ft) of clean soil cover for interim radiological, health, and safety protection purposes. The materials previously placed over the engineered pit structure (original pit excavation) are identified collectively as overburden materials.

Waste Type: Sludge

Waste Description:

The site received radioactively contaminated sludge from the bottom of the 107-DR Retention Basin. From process knowledge, the waste site contaminants of concern (COCs) identified in the SAP include the following (DOE-RL 1998a): Americium-241, Cobalt-60, Cesium-137, Europium-152, Europium-154, Europium-155, Plutonium-238, Plutonium-239/240, Strontium-90, Hexavalent chromium, and Polychlorinated biphenyls (PCBs).

Site Code: 100-D-5 Classification: Accepted

Site Names: 100-D-5, Waste Site Near 103-D, ReClassification: Interim Closed Out (4/23/2001)

Undocumented Solid Waste Site,

Undocumented Solid Waste Site Near 103-

D

Site Type:Burial GroundStart Date:1950Site Status:InactiveEnd Date:1950

Site The site was remediated and closed out with the 100-D, Group 3 waste sites.

Description:

Waste Type: Demolition and Inert Waste

ReClassification: Interim Closed Out (4/23/2001)

Waste The waste included reactor cooling water discharge, and debris generated in a 1950

Description: modification. The contaminated soil and debris were removed and taken to ERDF along with

100-D, Group 3 waste site remediation (100-D-48:3, 100-D-49:3, and 100-D-6).

Site Code: 100-D-6 Classification: Accepted

Site Names: 100-D-6, Buried VSR Thimble, Minor

Construction Burial Ground #1, Burial

Ground 4D, 118-D-4D

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1953

Site The site was remediated and closed out with the 100-D, Group 3 waste sites.

Description:

Waste Type: Equipment

Waste Description:

The burial ground contains contaminated thimbles, radioactive guides and miscellaneous waste removed from the 105-D Reactor during Ball 3X outage. The thimbles were made of aluminum, similar to that used for process tubes. Isotopic analysis of process tubes indicated the presence of manganese-54 and cobalt-60. The thimbles are expected to have similar composition. When buried, the thimbles' exterior surfaces would have been contaminated with activated graphite products and any remaining potassium borate solution from within the thimble tubes.

Site Code: 100-D-7 Classification: Accepted

Site Names: 100-D-7, Undocumented Solid Waste Site ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site rebar, v

The site contains a variety of debris such as broken concrete, brick, vitrified clay pipe, wood, rebar, various types of metal, lathe turnings, empty oil, solvent, paint cans, tar, and a white substance in two localized areas. The site appears to have additional debris buried under the surface and there is evidence of disturbance from heavy equipment. Several areas of stressed

vegetation and two areas of subsidence were also observed.

Waste Type: Misc. Trash and Debris

Waste Wastes include vitrified clay pipe, concrete, empty metal containers, glass, metal and wooden

Description: debris.

Site Code: 100-D-8 Classification: Accepted

Site Names: 100-D-8, 105-DR Process Sewer Outfall ReClassification:

Site, Undocumented Liquid Waste Site,

1907-DR

Site Type:OutfallStart Date:1949Site Status:InactiveEnd Date:1968

Site In 1978, the outfall structure was demolished, leveled, and covered to blend with the riverbank

Description: appearance.

Waste Type: Water

Waste The outfall was used to discharge waste water from the 183-DR and 190-DR Water Treatment **Description:** Facilities. Effluents included filter backwash effluent, storm runoff, and chemical discharges

Facilities. Effluents included filter backwash effluent, storm runoff, and chemical discharges resulting from spills or releases relating to water treatment facilities. There is a potential for

radioactive contamination from the 100-D Area Cask Pad storm drains.

Site Code: 100-D-9 Classification: Accepted

Site Names: 100-D-9, 184-DA Boiler Oil Tank ReClassification:

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site This site is where an underground fuel storage tank was located. The tank held fuel oil for the 184Description: DA Boiler House. It had a capacity of 94,600 liters (25,000 gallons) and was covered by at least

DA Boiler House. It had a capacity of 94,600 liters (25,000 gallons) and was covered by at least 0.6 meters (2 feet) of overburden. The elevation at the top of the tank was 141 meters (464.0 feet). It now appears as a cobble-covered field with vegetation on the surface. Soil gas probes from D. Jacques' investigation were observed during the April 13, 1999, visit. Tumbleweeds were collecting in a small (approximately 0.6 meters (2 feet) by 0.9 meters (3 feet)) shallow depression.

Waste Type: Equipment

Waste Description:

Site Code: 100-D-10 Classification: Rejected (8/27/1997)

Site Names: 100-D-10, Storm Drain Outfall, ReClassification:

Undocumented Liquid Waste Site

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The Technical Baseline Report (section 4.40) states that reportedly there was a small outfall

Description: structure upstream of the 1907-DR outfall. It was demolished at the same time as the 1907-DR

outfall.

The Technical Baseline Report states that the structure was similar in construction to the 1907-DR, only much smaller. It was used as a discharge outfall for the storm drain system of the 190-DR tank pit, which consisted of drains, sump, and pump to lift runoff to the outfall.

The trench from the outfall structure to the waterline is apparent and appears to have a telephone cable buried in its bottom.

Waste Type: Stormwater Runoff

Waste The unit reportedly received storm water run-off from the 190-DR tank pit.

Description:

Site Code: 100-D-18 Classification: Accepted

Site Names: 100-D-18, Sludge Trench #4, 107-D Sludge ReClassification: Interim Closed Out (9/26/2000)

Trench #4, 107-D-4, 107-D4

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1953

Site This site has been remediated and was closed out on September 26, 2000. It is no longer posted.

Description:

Waste Type: Sludge

Waste The site received contaminated sludge from the bottom of the 107-D Retention Basin (116-D-7).

Description:

Site Code: 100-D-19 Classification: Accepted

Site Names: 100-D-19, Sludge Trench #6, 107-D Sludge ReClassification: Interim Closed Out (3/26/2001)

Trench #6

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1953

Site This site has been remediated and closed out. It was a trench dug for disposal of sludge from the

Description: bottom of the 107-D Retention Basin. The waste was covered by about 1.8 meters (6 feet) of

clean fill.

Waste Type: Sludge

Waste The site received radioactively contaminated sludge from the bottom of the 107-D Retention

Description: Basin.

Site Code: 100-D-20 Classification: Accepted

Site Names: 100-D-20, Sludge Trench #3, 107-D Sludge ReClassification: Interim Closed Out (3/25/1999)

Trench #3, 107-D-3, 107-D3

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1953

Site This site has been remediated and closed out.

Description:

The 100-D-20 Sludge Pit was constructed in 1953. This pit and two other identified sludge pits were associated with maintenance clean out of the 116-D-7 Liquid Effluent Retention Basin, which was constructed in the late 1940s. The 116-D-7 Liquid Effluent Retention Basin was used to hold reactor effluent water for a brief period of time, allowing radioactive decay and thermal cooling to occur before the water discharged to the Columbia River. The sludge pits were built for disposal of sludge removed from the bottom of the effluent retention basin to enable periodic maintenance and repairs to the basin during operation of the 100-D and 100-DR Reactors. There is no indication from available records that this sludge pit directly received any regular and/or high-volume liquid effluent wastes.

The sludge pit consisted of an approximate 575-square meter (6,189-square feet) unlined excavation (bottom dimension) with moderately sloped side walls, extended to a depth of about 2.1 m (7 ft) below grade, and the pit was surrounded by native sandy gravel soils at the base and side walls of the excavation. After shutdown of the 100-D and 100-DR Reactors in the 1970s, subsequent decommissioning of the effluent retention basin and associated sludge pits (as part of the Radiation Area Remedial Action Program) included placement of approximately 2 m (7 ft) of material within the sludge pit, which consisted primarily of soil with some miscellaneous debris material from the effluent basin and surrounding area. This sequence of material placement was

followed by placement of approximately 1 m (3 ft) of clean soil cover for interim radiological, health, and safety protection purposes. The materials previously placed over the engineered pit structure (original pit excavation) are identified collectively as overburden materials. A Geophysical Survey was done in 1996 that identified this trench as a disturbed zone that may also contain buried construction debris.

The trench is outside the south perimeter of 107-D. Refer to Hanford Drawing H-1-4046.

Waste Type: Sludge

Waste Description:

The site received radioactively contaminated sludge from the bottom of the 107-D Retention Basin. From process knowledge, the waste site contaminants of concern (COCs) identified in the SAP include the following (DOE-RL 1998a): Americium-241, Cobalt-60, Cesium-137, Europium-152, Europium-154, Europium-155, Plutonium-238, Plutonium-239/240, Strontium-90, Hexavalent chromium, and Polychlorinated biphenyls.

Site Code: 100-D-21 Classification: Accepted

Site Names: 100-D-21, Sludge Trench #2, 107-DR ReClassification: Interim Closed Out (3/25/1999)

Sludge Trench #2, 107-D-2, 107-D2

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1953

Site Description:

The 100-D-21 Sludge Pit was constructed in 1953. This pit and two other identified sludge pits were associated with maintenance cleanout of the 116-D-7 Liquid Effluent Retention Basin, which was constructed in the late 1940s. The 116-D-7 Liquid Effluent Retention Basin was used to hold reactor effluent water for a brief period of time, allowing radioactive decay and thermal cooling to occur before the water was discharged to the Columbia River. The sludge pits were built for disposal of sludge removed from the bottom of the effluent retention basin to enable periodic maintenance and repairs to the basin during operation of the 100-D and 100-DR Reactors. There is no indication from available records that this sludge pit directly received any regular and/or high-volume liquid effluent wastes.

The sludge pit consisted of an approximate 891-square meter (9,591-square feet) unlined excavation (bottom dimension) with moderately sloped side walls, extending to a depth of about 3 m (10 ft) below grade. The pit was surrounded by native sandy gravel soils at the base and side walls of the excavation. After shutdown of the 100-D and 100-DR Reactors in the 1970s, subsequent decommissioning of the effluent retention basin and associated sludge pits (as part of the Radiation Area Remedial Action Program) included placement of approximately 2 m (7 ft) of material within the sludge pit. The materials consisted primarily of soil with some miscellaneous debris material from the effluent basin and surrounding area. This sequence of material placement was followed by placement of approximately 1 m (3 ft) of clean soil cover for interim radiological, health, and safety protection purposes. The waste was covered with about 1.8 meters (6 feet) of clean fill and marked with an above-ground concrete marker. The materials previously placed over the engineered pit structure (original pit excavation) are identified collectively as overburden materials.

Waste Type: Sludge

Waste Description:

The site received radioactively contaminated sludge from the 107-DR Retention Basin. From process knowledge, the waste site contaminants of concern (COCs) identified in the SAP include the following (DOE-RL 1998a): Americium-241, Cobalt-60, Cesium-137, Europium-152, Europium-154, Europium-155, Plutonium-238, Plutonium-239/240, Strontium-90, Hexavalent chromium, and Polychlorinated biphenyls (PCBs).

Site Code: 100-D-22 Classification: Accepted

Site Names: 100-D-22, Sludge Trench #1, 107-DR ReClassification: Interim Closed Out (3/25/1999)

Sludge Trench #1, 107-D-1, 107-D1

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1953

Site Description:

The 100-D-22 Sludge Pit was constructed in 1953. This pit and two other identified sludge pits were associated with maintenance cleanout of the 116-DR-9 Liquid Effluent Retention Basin, which was constructed in the late 1940s. The 116-DR-9 Liquid Effluent Retention Basin was used to hold reactor effluent water for a brief period of time, allowing radioactive decay and thermal cooling to occur before the water was discharged to the Columbia River. The sludge pits were built for disposal of sludge removed from the bottom of the effluent retention basin to enable periodic maintenance and repairs to the basin during operation of the 100-D and 100-DR Reactors. There is no indication from available records that this sludge pit directly received any regular and/or high-volume liquid effluent wastes.

The sludge pit consisted of an approximate 340-square meter (3,658-square feet) unlined excavation (bottom dimension) with moderately sloped side walls, extended to a depth of about 3 m (10 ft) below grade, and the pit was surrounded by native sandy gravel soils at the base and side walls of the excavation. After shutdown of the 100-D and 100-DR Reactors in the 1970s, subsequent decommissioning of the effluent retention basin and associated sludge pits (as part of the Radiation Area Remedial Action Program) included placement of approximately 2 m (7 ft) of material within the sludge pit, which consisted primarily of soil with some miscellaneous debris materials from the effluent basin and surrounding area. This sequence of material placement was followed by placement of approximately 1 m (3 ft) of clean soil cover for interim radiological, health, and safety protection purposes. The materials previously placed over the engineered pit structure (original pit excavation) are identified collectively as overburden materials.

The site is outside the east perimeter of the 107-DR Basin. Sludge was removed from the bottom of the 107-DR Basin in the spring of 1953 and buried in a nearby trench. The waste was covered with about 1.8 meters (6 feet) of clean fill and marked with an above-ground concrete marker. The Technical Baseline Report (Section 4.8) says more than one sludge trench was placed in this area. Refer to Hanford Drawing H-1-4046. A Geophysical Survey was done in 1996 that identified the trench as a disturbed zone and contains what appears to be construction debris.

The site has been remediated.

Waste Type: Sludge

Waste Description:

The site received radioactively contaminated sludge from the 107-DR Retention Basin. From process knowledge, the waste site contaminants of concern (COCs) identified in the SAP include the following (DOE-RL 1998a): Americium-241, Cobalt-60, Cesium-137, Europium-152, Europium-154, Europium-155, Plutonium-238, Plutonium-239/240, Strontium-90, Hexavalent chromium, and Polychlorinated biphenyls (PCBs). A small volume of debris containing lead was encountered during remedial action, which was subsequently transported, treated, and disposed of at the ERDF. Because of the presence of lead-containing debris, lead was included as a COC per regulator request (Ecology 1998).

Site Code: 100-D-24 Classification: Accepted

Site Names: 100-D-24, 119D Sample Building Drywell **ReClassification:**

Site Type: French Drain **Start Date:** 1959

Site Status: Inactive **End Date:**

The site is a drywell that received drainage from a floor drain in the 119-D Sample Building. The Site **Description:**

sample building has been demolished and the surrounding area has been graded. The drywell was

not visible during a site visit on July 15, 1997 by T. F. Johnson.

The drywell was connected to the 119-D Sample Building by a 5-centimeter (2-inch) drainage pipe buried at least 0.9 meters (3 feet) below grade. A 1.9-centimeter (3/4-inch) drain line from the building's evaporative cooler connected into the 5-centimeter (2-inch) drain line near the

southern edge of the building.

Process Effluent **Waste Type:**

Waste The drywell received effluent from the building's evaporative cooler. It is likely that the floor drain also received sample waste and janitorial waste since the building had no other drains or **Description:**

connections to the process sewer system.

Site Code: 100-D-25 **Classification:** Accepted

100-D-25, Unplanned Release: 107-DR **ReClassification:** Interim Closed Out (1/6/2000) **Site Names:**

Basin Leaks

Site Type: Unplanned Release **Start Date:** 1951

Site Status: Inactive **End Date:**

Leakage from the 107-DR Basin was confined to the south end and beneath the basin. Today the Site

Description: area cannot be separately distinguished in the gravel retention basin area.

Waste Type: Water

Waste Radioactively contaminated effluent was released to the site.

Description:

Site Code: 100-D-26 Classification: Rejected (8/27/1997)

100-D-26, Borrow Pit, Potential Burial ReClassification: **Site Names:**

Trenches

Site Type: Depression/Pit (nonspecific) **Start Date:**

Site Status: Inactive **End Date:**

The site is a borrow pit used as a source of clean fill. On July 10, 1997 a field investigation was Site **Description:** performed by T. F. Johnson. The site appeared as a depression approximately 330 feet (100

meters) in diameter that was created from excavations with heavy equipment. Four distinct trenches were observed within the depression. All four trenches were covered with blown in tumbleweeds. A few tumbleweeds were removed for inspection and no waste or discolored soil was observed. An empty 208 liter (55 gallon) steel drum was located at the end of one trench

and an empty 0.95 liter (1 quart) oil can was also observed near the site.

Waste Type: Barrels/Drums/Buckets/Cans

Waste An empty steel 55 gallon drum and an empty 1 quart oil can were observed at the site.

Description:

Site Code: 100-D-29 Classification: Accepted

Site Names: 100-D-29, Effluent Line Leak #2 ReClassification:

Site Type: Unplanned Release Start Date: 1951

Site Status: Inactive End Date:

Site In 1951 the area was marked with a rope fence and posted as a radiation area. Today the area can

Description: not be separately distinguished in the gravel retention basin area.

Waste Type: Process Effluent

Waste

Description:

Site Code: 100-D-30 Classification: Accepted

Site Names: 100-D-30, 190-D Sodium Dichromate Soil ReClassification:

Contamination, 185-D, 189-D

Decontamination & Demolition Project, 185-D Sodium Dichromate Trench & Sump

Site Type:Unplanned ReleaseStart Date:1945Site Status:InactiveEnd Date:1967

Site The site is sodium dichromate contaminated soil. The site was discovered during the 185-D/189-Description:

D Subgrade Decontamination and Demolition Project. Sodium dichromate contamination was

discovered in the soil along the entire length of the sodium dichromate trench of 185-D. The contamination was visually identified on concrete surfaces and on large cobbles in the soil by the yellow film on the surface. Photographs were taken during demolition of the subgrade structures

and show the contaminated soil and structures.

Waste Type: Chemical Release

Waste Sodium dichromate contamination is in the soil.

Description:

Site Code: 100-D-31 Classification: Accepted

Site Names: 100-D-31,100-D Water Treatment **ReClassification:**

Facilities Underground Pipelines

Site Type:Process SewerStart Date:1944Site Status:InactiveEnd Date:1994

Site The site encompasses the underground pipelines that transported treated cooling water, and **Description:** process sewer wastes, including all non-radioactive, waste streams from water treatment, reactor,

and laboratory facilities. All of these underground pipelines are pre-reactor (pre-irradiation) disposal and supply lines, except for the septic sewer lines that fed the 1607-D2 septic tank and the 100-D-13 septic system. It does not include the process sewer system that was constructed specifically for the 100-DR Reactor facilities, chemical supply, or underground effluent pipelines designed to dispose of radionuclide contaminated effluents and pipelines within buildings. These systems are addressed as separate Waste Information Data System (WIDS) sites. This site also does not include raw river water, potable water, or fire system water pipelines, or the sodium

dichromate underground supply pipelines (100-D-56).

Waste Type: Water

Waste Description:

The waste consists of steel piping, concrete, and soil (if contaminants are present). The water supply and process sewer drain pipelines at the 100-D Area provided for the supply and disposal of non-radioactive streams generated in water treatment and water treatment laboratories facilities and powerhouse operations. Known chemical additions to reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained near 7.5, free chlorine residual at about 0.2 milligrams per liter, and sodium dichromate was added at a rate of about 2 milligrams per liter. The sodium dichromate product pipelines would have much greater concentrations. Sodium chloride was also used to regenerate water softeners in both water treatment and powerhouse operations.

The process sewer system connected to the 116-D-5 (1904-D Outfall) at the Columbia River shoreline. (The outfall and the pipelines that carried the process sewer and reactor effluent to the center bottom of the river are addressed by separate Waste Information Data System [WIDS] entries.) Specific chemicals and potential radionuclide content is currently unknown. However, minor amounts of radionuclide, chemical, and mercury contamination may be present in process sewer lines from the 185-D and 189-D/190-D complex as a result of laboratories once located in these now demolished facilities.

Site Code: 100-D-32 Classification: Accepted

Site Names: 100-D-32, Minor Construction Burial **ReClassification:**

Ground #6

Site Type: Burial Ground Start Date: 1956

Site Status: Inactive End Date:

Site The site is a small 3.0-meter (10-foot) by 3.0-meter (10-foot) burial ground. During the March

Description: 1999 visit, there was no evidence of the site.

Waste Type: Equipment

Waste The burial ground was excavated to receive contaminated reactor and effluent system

Description: equipment. Potential contaminates include: Co-60, Ni-63, Sr-90, Cs-137, Eu-152, Eu-154, U-

238, Pu-238, Pu-239/240, chromium, lead, mercury

Site Code: 100-D-33 Classification: Accepted

Site Names: 100-D-33, Minor Construction Burial **ReClassification:**

Ground #4 East Trench

Site Type: Burial Ground Start Date: 1954

Site Status: Inactive End Date:

Site The site is one of two trenches running in a north to south direction. It is approximately 30 meters

Description: (100 feet) long by 15 meters (50 feet) wide. The site appears as a vegetation-free, cobble-covered

field. During the March 31, 1999, visit, there was no evidence of the trench

Waste Type: Construction Debris

Waste The site received low-level construction wastes from the reactors. Potential contaminates

Description: include: Co-60, Ni-63

Site Code: 100-D-34 Classification: Rejected (8/27/1997)

Site Names: 100-D-34, 100-D/DR Grounds Surrounding **ReClassification:**

Deactivated Areas, Exclusion Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The grounds within the 100-D/DR exclusion area that are not part of other waste sites.

Description:

Site Code: 100-D-35 Classification: Accepted

Site Names: 100-D-35, Minor Construction Burial **ReClassification:**

Ground #4 West Trench

Site Type: Burial Ground Start Date: 1954

Site Status: Inactive End Date:

Site The site is one of two trenches running in a north-south direction. It is approximately 30 meters **Description:** (100 feet) long by 15 meters (50 feet) wide. The site appears as a vegetation-free, cobble-covered

field. During the March 31, 1999, visit, there was no evidence of the trench.

Waste Type: Construction Debris

Waste The site received low-level construction wastes from the reactors. Potential contaminates

Description: include: Co-60, Ni-63

Site Code: 100-D-38 Classification: Rejected (8/27/1997)

Site Names: 100-D-38, Suspect Septic Tank ReClassification:

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site is a junction box and manhole associated with the 1607-D2 Septic System. The site is

Description: identifiable in the field by a steel lid on top of a circular brick base.

Site Code: 100-D-41 Classification: Accepted

Site Names: 100-D-41, Minor Construction Burial ReClassification:

Ground #5 Trench, 118-18, 118-D-18

Site Type:Burial GroundStart Date:1956Site Status:InactiveEnd Date:1956

Site The site currently appears as a field with vegetation growing on the surface. The site was a 23-

Description: meter (75-foot) by 12-meter (40-foot) rectangular burial ground, trending north to south.

Waste Type: Construction Debris

Waste The waste is miscellaneous construction related solid wastes from the 100-D Reactors. Potential

Description: contaminates include: Co-60, Ni-63

Site Code: 100-D-42 Classification: Accepted

Site Names: 100-D-42, Buried VSR Thimble Site **ReClassification:**

Site Type:Burial GroundStart Date:1955Site Status:InactiveEnd Date:1955

Site The site is a solid waste burial ground. The burial ground is east of the two 152-centimeter (60-

Description: inch) reactor effluent lines.

Waste Type: Equipment

Waste The waste is a buried Vertical Safety Rod (VSR) thimble. The VSR thimbles were made of aluminum similar to that used in the process tubes and should contain similar isotopic

composition. Sampling of process tubes was conducted in March 1967. The radionuclide levels, when decay corrected by Dorian and Richards to March 1977, were 5.9E+03 picocuries of manganese-54 per gram of aluminum and 2.5E+07 picocuries of cobalt-60 per gram of aluminum. When buried, the thimble's exterior surfaces would also have been contaminated

with activated graphite products and potassium borate.

Site Code: 100-D-45 Classification: Accepted

Site Names: 100-D-45, Buried VSR Thimble Site, **ReClassification:**

Burial Ground 4B, 118-D-4B

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site The site is a solid waste burial ground. The burial ground is in close proximity to the 152-

Description: centimeter (60- inch) effluent lines.

Waste Type: Equipment

Waste The Description: alu

The waste is a buried Vertical Safety Rod (VSR) thimble. The VSR thimbles were made of aluminum similar to that used in the process tubes and should contain similar isotopic composition. Sampling of process tubes was conducted in March 1967. The radionuclide levels, when decay corrected by Dorian and Richards to March 1977, were 5.9E+03 picocuries of manganese-54 per gram of aluminum and 2.5E+07 picocuries of cobalt-60 per gram of aluminum. When buried, the thimble's exterior surfaces would also have been contaminated with activated graphite products and potassium borate. Potential contamination includes: Co-

60, Ni-63

Site Code: 100-D-48 Classification: Accepted

Site Names: 100-D-48, 100-D Reactor Cooling Water ReClassification: Interim Closed Out (4/23/2001)

Effluent Underground Pipelines

Site Type:Radioactive Process SewerStart Date:1944Site Status:InactiveEnd Date:1967

Site All four subsites have been remediated and closed out.

Description:

The 100-D-48 site includes those underground pipelines that transported radioactive treated and untreated waste water from the 105-D Reactor Building to the 116-D-7 (107-D) Retention Basin and the 116-D-5 Outfall. The included pipeline components are listed below.

There are many small drain pipelines that leave from the east and south sides of the 105-D Reactor Building and terminate at the 132-D-3 (1608-D) Building site. The pipelines that run from the 105-D Reactor and the 132-D-3 (1608-D) Building to either the 116-D-1A Trench and 116-D-1B Trench or connect to the main cooling water effluent pipelines are part of this site.

The main cooling water effluent pipeline is a large 1.5-meter (60-inch) diameter reinforced concrete pipeline that exits the 105-D Reactor Building on the north side and continues north to the 116-D-7 (107-D) Retention Basin. A map in the Dorian and Richards document, UNI-946, indicates that some sections of the pipeline were replaced at least once (as does M-1904-D Sheet 8). The second (replacement) pipeline begins at a junction box south of the 116-D-7 (107-D) Retention Basin and runs parallel to the original pipeline up to the 116-D-7 (107-D) Retention Basin. Currently, a portion of the steel replacement pipeline remains in place above grade at the retention basin, and a soil berm indicates the location of the pipeline.

This pipeline system also includes a 1.5-meter (60-inch) diameter by 1.3-centimeter (0.5-inch) thick wall, carbon steel cross-tie pipeline to the 105-DR effluent pipelines that begins adjacent to the 103-D Building and connects at a junction box to the west 100-DR Reactor Cooling Water Effluent Pipeline (site 100-D-49).

This site includes a single pipeline that runs from the west end of the 116-D-7 (107-D) Retention Basin to the 116-DR-1 Trench and 116-DR-2 Trench and two pipelines from the west end of the 116-D-7 (107-D) Retention Basin to the 116-D-5 Outfall.

Because of their length, these pipelines have been broken into four subsites: 100-D-48:1, the pipelines from 116-D-7 to the outfalls; 100-D-48:2, the pipelines from D Avenue to 116-D-7; 100-D-48:3, the pipelines from D Avenue to the 105-D Reactor; and 100-D-48:4, the small cooling water effluent pipelines at the 105-D Reactor.

The site does not include the facilities where the pipelines terminate, or the pipelines (100-D-60) from the 116-D-5 Outfall to the bottom center of the Columbia River. The pipelines associated with (100-D-49) 100-DR Reactor Cooling Water Effluent Underground Pipelines or (100-D-50) 100-DR Reactor Process Sewer Underground Pipelines [pipelines that transported nonradioactive treated and untreated waste water from the 183-DR, 183-DR Clearwell area and the 105-DR Reactor Buildings to the 100-D-8 (1907-DR) Outfall] are not included in this site.

Waste Type: Process Effluent

Waste Description:

The waste is contaminated steel piping, concrete, and soil. Chemical additives to reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, diatomaceous earth (a scouring agent), and sodium dichromate. Water pH was maintained at about 7.5, and free chlorine residual was about 0.2 milligrams per liter. Radionuclides discovered at the retention basin during sampling by Dorian and Richards (1978) included the following: plutonium-238, cesium-134, plutonium 239/240, cesium-137, strontium-90, hydrogen-3, uranium, europium-152, europium-154, europium-155, nickel-63, cobalt-60, and carbon-14.

SubSites:

SubSite Code: 100-D-48:1

SubSite Name: 100-D-48:1, North Pipelines from 116-D-7 to the Outfalls

Classification: Accepted

ReClassification: Interim Closed Out

Description: This subsite is the section of the pipelines that runs from the 116-D-7 Retention Basin to the

Outfalls. These pipelines have been removed.

Remedial action at the 100-D-48:1/49:1 Pipelines site began on December 28, 1998. Excavation of the site involved removing the overburden materials, the contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at ERDF. On July 24, 2000, the excavation reached the design limit. Because remediation of the 100-D-48:1/49:1 Pipelines site required moving an active overhead power line, site remedial action and sampling were conducted in two phases. These separate phases are reflected by the long time period between the start and finish dates for excavation.

The excavation design depth generally corresponded with the invert elevation of the pipelines. At the completion of remedial action and removal of the engineered structure, the excavation was approximately 15,504 square meters (166,800 square feet) in area with a maximum depth of approximately 6.0 meters (20 feet) below ground surface. Approximately 107,266 metric tons (118,241 tons) of material from the D Area pipelines site have been disposed of at the ERDF through July 2000. Cleanup verification sampling began on April 3, 2000, and was finished on August 8, 2000. The ground surface in the vicinity of the site varies with an average elevation of approximately 134.4 meters (441 feet).

The CVP demonstrated that remedial action at the 100-D-48:1/49:1 Pipelines site achieved the RAOs and corresponding RAGs established in the approved interim action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). The remaining soils at the 100-D-48:1/49:1 Pipelines site have been sampled, analyzed, and modeled. The results of this effort indicate that the materials from the 100-D-48:1/49:1 Pipelines site containing COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. Residual concentrations in the shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual COC concentrations throughout the site do not pose an unacceptable threat to groundwater or the Columbia River.

The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:1/49:1 Pipelines site (includes the 100-D-19 and UPR-100-D-4 sites) is verified to be remediated in accordance with the interim action ROD (EPA 1995).

SubSite Code: 100-D-48:2

SubSite Name: 100-D-48:2, West Pipelines from D Avenue to 116-D-7

Classification: Accepted

ReClassification: Interim Closed Out

Description: This section of two parallel pipelines runs from D Avenue to the 116-D-7 Retention Basin.

Remedial action at the 100-D-48:2/49:2 Pipelines site began in July 1997. Excavation of the site involved removing the overburden materials, contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at the ERDF. In August 1999, the excavation reached the design limit. The excavation design depth generally corresponded with the invert elevation of the pipelines.

Hanford Site Waste Management Units Report January 2004

At the completion of remedial action and removal of the engineered structure, the excavation was approximately 20,475 square meters (220,280 square feet) in area with a maximum depth of approximately 6 meters (20 feet) below ground surface. During the time of excavation and waste disposal (December 1998 through September 1999) at the 100-D-48:2/49:2 Pipelines site, approximately 57,106 metric tons (62,960 tons) of material from 100-DR-1 Operable Unit pipelines were disposed of at the ERDF. Cleanup verification sampling began on August 23, 1999, and was finished on October 20, 1999. Because of the length of the pipeline site, the top-of-excavation elevation ranges from 138 meters (453 feet) near the retention basins to 143 meters (469 feet) near D Avenue.

The CVP demonstrated that remedial action at the 100-D-48:2/49:2 Pipelines site has achieved the RAOs and corresponding RAGs established in the approved interim action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). Materials from the 100-D-48:2/49:2 Pipelines site that contain COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. The remaining soils, including pipeline overburden stockpiles, have been sampled, analyzed, and modeled to show that residual concentrations in the shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual concentrations throughout the site and in overburden soils pose no threat to groundwater or the Columbia River. The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:2/49:2 Pipelines site is verified to be remediated in accordance with the ROD and may be backfilled. The pipeline overburden is verified as suitable for use as backfill in accordance with the ROD.

SubSite Code: 100-D-48:3

SubSite Name: 100-D-48:3, Effluent Pipelines from D Avenue to 105-D Reactor

Classification: Accepted

ReClassification: Interim Closed Out

Description: This subsite is the last section of the 105-D Reactor effluent pipelines, extending south from

D Avenue to about 1.5 meters (5 feet) from the wall of the reactor foundation. The Decontamination and Decommissioning project is responsible for the remaining stub as part

of the foundation removal.

This subsite was remediated in conjunction with 100-D-49:3, 100-D-5, and 100-D-6. The entire remedial action for these sites is referred to as the 100-D-48:3/49:3 pipelines site. Remedial action at the 100-D-48:3/49:3 site began on October 28, 1999. Excavation of the site involved removing the overburden materials, the contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at ERDF. On July 24, 2000, the excavation was completed. The excavation design depth generally corresponded with the invert elevation of the pipelines.

At the completion of remedial action and removal of the engineered structure, the excavation was approximately 24,574 square meters (264,517 square feet) in area with a maximum depth of approximately 5.7 meters (18.7 feet). Approximately 55,561 metric tons (61,245 tons) of material from the 100-D-48:4 and 100-D-48:3/49:3 pipeline sites combined were disposed of at ERDF. Overall, approximately 107,266 metric tons (118,241 tons) from all D Area pipeline sites were disposed of at the ERDF through July 2000. Cleanup verification sampling began on June 7, 2000 (for the overburden piles), and was finished on October 4, 2000 (in the excavation). The excavation is being backfilled with appropriate materials to match the surrounding surface grade (average elevation of 143.7 meters [471 feet]).

The CVP demonstrates that the remedial action at the 100-D-48:3/49:3 Pipelines site has achieved the RAOs and corresponding RAGs established in the approved Interim Action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). The remaining soils at the 100-D-48:3/49:3 Pipelines site and overburden have been sampled, analyzed, and modeled. The results of this effort indicate that the materials from the 100-D-48:3/49:3 site containing COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. These results also indicate that residual concentrations in the overburden and shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual COC concentrations throughout the site do not pose an unacceptable threat to groundwater or the Columbia River.

The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:3/49:3 Pipelines site is verified to be remediated in accordance with the ROD.

SubSite Code: 100-D-48:4

SubSite Name: 100-D-48:4, Small Cooling Water Effluent Pipelines at 105-D Reactor

Classification: Accepted

Description:

ReClassification: Interim Closed Out

This subsite has been closed out. It includes the many small drain pipelines that leave from the east and south sides of the 105-D Reactor Building and terminate at the 132-D-3 (1608-D) Building site. The pipelines that run from the 105-D Reactor and the 132-D-3 (1608-D) Building to either the 116-D-1A Trench and 116-D-1B Trench or connect to the main cooling water effluent pipelines are also part of this subsite.

Remedial action at the 100-D-48:4 site began on October 28, 1999. Excavation of the site involved removing the overburden materials, the contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at ERDF. On July 24, 2000, the excavation reached the design limit at El. 136 meters (446 feet).

At the completion of remedial action and removal of the engineered structure, the excavation was approximately 3,291 square meters (35,420 square feet) in area with a maximum depth of approximately 7 meters (23 feet). Approximately 27,738 metric tons (30,576 tons) of material from the site were disposed of at ERDF. Cleanup verification sampling began on September 11, 2000, and was completed on October 18, 2000. The excavation is to be backfilled with appropriate materials to the reference grade of El. 143 meters (469 feet).

The CVP demonstrates that remedial action at the 100-D-48:4 site has achieved the RAOs and corresponding RAGs established in the approved interim action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). The remaining soils at the 100-D-48:4 site have been sampled, analyzed, and modeled. The results of this effort indicate that the materials from the 100-D-48:4 site containing COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF, that residual concentrations in the shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual COC concentrations throughout the site do not pose an unacceptable threat to groundwater or the Columbia River.

The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation

into the deep zone (i.e., below 4.6 meters [15 feet]) are required.

Site Code: 100-D-49 Classification: Accepted

Site Names: 100-D-49, 100-DR Reactor Cooling Water ReClassification:

Effluent Underground Pipelines

Site Type:Radioactive Process SewerStart Date:1950Site Status:InactiveEnd Date:1967

Site Description:

There are four subsites associated with this site. The entire site includes those underground pipelines that transported radioactive treated and untreated waste water from the 105-DR Reactor Building, and the 132-DR-1 (1608-DR) Building to the 116-DR-9 (107-DR) (107-DR) Retention Basin and both of the 116-D-5 and 116-DR-5 Outfalls. The included pipeline components are listed below.

There are many small drain pipelines that originate on the east side of the 105-DR Reactor Building and terminate at the 132-DR-1 (1608-DR) Building site. The drain pipelines that run from the 132-DR-1 (1608-DR) to either the 116-DR-6 Trench or connect to the main cooling water effluent pipelines are part of this site.

The main cooling water effluent pipelines are two large 1.5-meter (60-inch) diameter by 1.3-centimeter (0.5-inch) thick wall carbon steel pipelines. The east pipeline exits the 105-DR Reactor Building on the south side and runs due east to the corner of the building and then heads northeast to a point about 75 meters (210 feet) east of the existing exclusionary fence and then north to the 116-DR-9 (107-DR) Retention Basin. The west pipeline exits the 105-DR Reactor Building on the north side and heads northeast to a point 55 meters (154 feet) east of the existing exclusionary fence and then north to the 116-DR-9 (107-DR) Retention Basin. The pipelines run parallel to each other and are separated by about 25 meters (70 feet).

This site also includes the discharge pipelines from the 116-DR-9 (107-DR) Retention Basin to the 116-DR-1 and 116-DR-2 Trench and both 116-D-5 and 116-DR-5 Outfalls. At the outlet of the 116-DR-9 (107-DR) Retention Basin, two 1.5-meter (60-inch) carbon steel pipelines are combined into a single 1.5-meter (60-inch) pipeline at a junction box. This pipeline then runs to the outfall structure. The outfall discharge pipeline is a 1.7-meter (66-inch) carbon steel pipeline that continues to the center of the Columbia River.

Because of its length, this site has been broken into three subsites: 100-D-49:1, the pipelines from 116-DR-9 to the Outfalls; 100-D-49:2, the pipelines from D Avenue to 116-DR-9; and 100-D-49:3, the pipelines from D Avenue to the 105-D Reactor.

The facilities where these pipelines terminate are not included as part of this site.

The following pipelines are not included as part of this site (included as part of 100-D-48): Opposite the 105-D Reactor Building, the west 105-DR Reactor effluent pipeline is cross-tied to the 105-D Reactor 1.5-meter (60-inch) effluent pipeline by a 1.5-meter (60-inch) diameter by 1.3-centimeter (0.5-inch) thick wall, carbon steel pipeline. The underground pipelines (100-D-50) that transported nonradioactive treated and untreated waste water from the 183-DR, 183-DR Clearwell area, and the 105-DR Reactor Buildings to the 100-D-8 (1907-DR) outfall are not included in this site.

Waste Type: Process Effluent

Waste The waste is contaminated steel piping, concrete, and soil. Chemical additives to reactor cooling **Description:** water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid,

chlorine, diatomaceous earth (a scouring agent), and sodium dichromate. Water pH was maintained at about 7.5, and free chlorine residual was about 0.2 milligrams per liter. Radionuclides discovered at the retention basin during sampling by Dorian and Richards (1978) for UNI-946, included: plutonium-238, cesium-134, plutonium 239/240, cesium-137, strontium-90, hydrogen-3, uranium, europium-152, europium-154, europium-155, nickel-63, cobalt-60, and carbon-14.

SubSites:

SubSite Code: 100-D-49:1

SubSite Name: 100-D-49:1, North Pipelines from 116-DR-9 to the Outfalls

Classification: Accepted

ReClassification: Interim Closed Out

Description: This subsite is the section of pipelines that run from the 116-DR-9 Retention Basin to the

Outfalls. This section has been removed.

This subsite was remediated with subsite 100-D-48:1, 100-D-19 Sludge Trench, and UPR-100-D-4, and are referred to as the 100-D-48:1/49:1 Pipelines site. Remedial action at the 100-D-48:1/49:1 Pipelines site began on December 28, 1998. Excavation of the site involved removing the overburden materials, the contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at ERDF. On July 24, 2000, the excavation reached the design limit. Because remediation of the 100-D-48:1/49:1 Pipelines site required moving an active overhead power line, site remedial action and sampling were conducted in two phases. These separate phases are reflected by the long time period between the start and finish dates for excavation.

The excavation design depth generally corresponded with the invert elevation of the pipelines. At the completion of remedial action and removal of the engineered structure, the excavation was approximately 15,504 square meters (166,800 square feet) in area with a maximum depth of approximately 6.0 meters (20 feet) below ground surface. Approximately 107,266 metric tons (118,241 tons) of material from the D Area pipelines site have been disposed of at the ERDF through July 2000. Cleanup verification sampling began on April 3, 2000, and was finished on August 8, 2000. The ground surface in the vicinity of the site varies with an average elevation of approximately 134.4 meters (441 feet).

The CVP demonstrated that remedial action at the 100-D-48:1/49:1 Pipelines site achieved the RAOs and corresponding RAGs established in the approved interim action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). The remaining soils at the 100-D-48:1/49:1 Pipelines site have been sampled, analyzed, and modeled. The results of this effort indicate that the materials from the 100-D-48:1/49:1 Pipelines site containing COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. Residual concentrations in the shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual COC concentrations throughout the site do not pose an unacceptable threat to groundwater or the Columbia River.

The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:1/49:1 Pipelines site (includes the 100-D-19 and UPR-100-D-4 sites) is verified to be remediated in accordance with the interim action ROD (EPA 1995).

SubSite Code: 100-D-49:2

SubSite Name: 100-D-49:2, East Pipelines from D Avenue to 116-DR-9

Classification: Accepted

ReClassification: Interim Closed Out

Description: This section of two parallel pipelines runs from D Avenue to 116-DR-9.

Remedial action at the 100-D-48:2/49:2 Pipelines site began in July 1997. Excavation of the site involved removing the overburden materials, contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at the ERDF. In August 1999, the excavation reached the design limit. The excavation design depth generally corresponded with the invert elevation of the pipelines. The pipeline excavation profiles are in the sample design calculation briefs in Appendix D.

At the completion of remedial action and removal of the engineered structure, the excavation was approximately 20,475 square meters (220,280 square feet) in area with a maximum depth of approximately 6 meters (20 feet) below ground surface. During the time of excavation and waste disposal (December 1998 through September 1999) at the 100-D-48:2/49:2 Pipelines site, approximately 57,106 metric tons (62,960 tons) of material from 100-DR-1 Operable Unit pipelines were disposed of at the ERDF. Cleanup verification sampling began on August 23, 1999, and was finished on October 20, 1999. Because of the length of the pipeline site, the top-of-excavation elevation ranges from 138 meters (453 feet) near the retention basins to 143 meters (469 feet) near D Avenue.

The CVP demonstrated that remedial action at the 100-D-48:2/49:2 Pipelines site has achieved the RAOs and corresponding RAGs established in the approved interim action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998). Materials from the 100-D-48:2/49:2 Pipelines site that contain COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. The remaining soils, including pipeline overburden stockpiles, have been sampled, analyzed, and modeled to show that residual concentrations in the shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual concentrations throughout the site and in overburden soils pose no threat to groundwater or the Columbia River. The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:2/49:2 Pipelines site is verified to be remediated in accordance with the ROD and may be backfilled. The pipeline overburden is verified as suitable for use as backfill in accordance with the ROD.

SubSite Code: 100-D-49:3

SubSite Name: 100-D-49:3, Effluent Pipelines from D Avenue to ~60 Meters from the 105-DR Reactor

Classification: Accepted

ReClassification: Interim Closed Out

Description: This subsite extends south from D Avenue to about 60 meters (200 feet) from the wall of the

reactor foundation, longer for the east pipeline and shorter for the west pipeline. The Decontamination and Decommissioning project is responsible for the remaining pipelines as

part of the foundation removal.

This subsite was remediated in conjunction with 100-D-48:3, 100-D-5, and 100-D-6. The

entire remedial action for these sites is referred to as the 100-D-48:3/49:3 pipelines site. Remedial action at the 100-D-48:3/49:3 site began on October 28, 1999. Excavation of the site involved removing the overburden materials, the contaminated structure, and underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at ERDF. On July 24, 2000, the excavation was completed. The excavation design depth generally corresponded with the invert elevation of the pipelines.

At the completion of remedial action and removal of the engineered structure, the excavation was approximately 24,574 square meters (264,517 square feet) in area with a maximum depth of approximately 5.7 meters (18.7 feet). Approximately 55,561 metric tons (61,245 tons) of material from the 100-D-48:4 and 100-D-48:3/49:3 pipeline sites combined were disposed of at ERDF. Overall, approximately 107,266 metric tons (118,241 tons) from all D Area pipeline sites were disposed of at the ERDF through July 2000. Cleanup verification sampling began on June 7, 2000, and was finished on October 4, 2000. The excavation will be backfilled in the near future with appropriate materials to match the surrounding surface grade (average elevation of 143.7 meters [471 feet]).

The CVP demonstrates that the remedial action at the 100-D-48:3/49:3 Pipelines site has achieved the RAOs and corresponding RAGs established in the approved Interim Action ROD (EPA 1995) and RDR/RAWP (DOE-RL 1998b). The remaining soils at the 100-D-48:3/49:3 Pipelines site and overburden have been sampled, analyzed, and modeled. The results of this effort indicate that the materials from the 100-D-48:3/49:3 site containing COCs at concentrations exceeding the RAGs have been excavated and disposed of at the ERDF. These results also indicate that residual concentrations in the overburden and shallow zone will support future land uses that can be represented (or bounded) by a rural-residential scenario, and that residual COC concentrations throughout the site do not pose an unacceptable threat to groundwater or the Columbia River.

The acceptability of unrestricted direct exposure to deep zone soils has not been demonstrated; therefore, institutional controls to prevent uncontrolled drilling or excavation into the deep zone (i.e., below 4.6 meters [15 feet]) are required. The 100-D-48:3/49:3 Pipelines site is verified to be remediated in accordance with the ROD.

(Note: Figure 3 in the CVP is incorrect. It does not show the total length of the excavation at the south end. Refer to Attachment 3 of the CVP for a map of the entire excavation, including sampling locations.

SubSite Code: 100-D-49:4

SubSite Name: 100-D-49:4, 100-DR Effluent Pipelines Within About 60 Meters of the Reactor

Classification: Accepted

ReClassification:

Description: This section of the effluent pipelines was transferred from the Remedial Action (RA) group to

Decontamination and Decommissioning (D&D) to allow D&D to continue their stabilization work on the DR Reactor. It contains the smaller effluent pipelines near the reactor, and the large main effluent pipelines (two adjacent pipes) extending from the reactor. The eastern main effluent pipe section is about 67 meters (220 feet) long; the western section is about 35

meters (115 feet) long.

Site Code: 100-D-50 Classification: Accepted

Site Names: 100-D-50, 100-DR Water Treatment

Facilities Underground Pipelines

ReClassification:

Site Type:Process SewerStart Date:1950Site Status:InactiveEnd Date:1965

Site This site includes those underground pipelines that transported nonradioactive treated and **Description:** untreated waste water from the 183-DR, 183-DR Clearwell area, and the 105-DR Reactor

Buildings to the 100-D-8 (1907-DR) Outfall. It consists of 0.3-meter (12-inch) to 1.8-meter (72-

inch) reinforced concrete piping located to the south of the facilities listed above.

Waste Type: Water

Waste Description:

The waste is steel pipelines, concrete, and soil (if contaminants are present). Chemical additives to reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, free chlorine residual was about 0.2 milligrams/liter, and sodium dichromate was added at a rate of about 2 milligrams per liter. Water and chemical storage tank overflows and other drains discharged to this disposal system. Drawings indicate that it also received storm drainage from the 183-DR Tank Clearwell Basin.

Sodium dichromate was used to treat reactor cooling water to assist in the control of process tube corrosion. Sodium dichromate storage tanks may have discharged to this system and potentially act as a source of elevated chromium found in the 100-D groundwater. However, unless there was a deliberate discharge of sodium dichromate to the system, only very dilute discharges would have occurred.

Site Code: 100-D-52 Classification: Accepted

Site Names: 100-D-52, 105-D Downcomer Insulation ReClassification: Interim Closed Out (11/8/2000)

Space Dry Well

Site Type: French Drain Start Date: 1955

Site Status: Inactive End Date:

Site Description:

This site has been remediated and closed out.

The site is a french drain (dry well). The 1-meter (3-foot) diameter dry well was filled with 2.2 meters (5 feet) of 2.5 to 5-centimeter (1 to 2-inch) gravel from the bottom at 6.9 meters (22 feet) below grade to the top at 5.2 meters (17 feet) below grade. The dry well was fed by a 10.2-centimeter (4-inch) steel drain pipe from Room 38A that entered the dry well at 5.8 meters (19 feet) below grade. The drain line discharged into the annulus between a vertical 25.4-centimeter (10-inch) diameter distributor pipe and vertical 10.2-centimeter (4-inch) diameter radiation monitor housing pipe in the center of the dry well. The monitor was used to ensure detection of radiation in the water (condensate or cooling water leakage) from Room 38A. (Room 38A of the 105-D Building is the concrete enclosure for the 105-D Downcomer.) The concentric distributor pipe and radiation monitoring housing pipe ended 30 centimeters (1 foot) above the bottom of the dry well. The radiation monitor pipe extended about 0.6 meters (2 feet) above grade with a valve on the upper end.

Waste Type: Water

Waste Description:

No record could be found that indicated any radiological or chemical contamination data. Based on available information it was assumed that contamination would be limited to those

radionuclides found in reactor effluent water that potentially leaked from the metal downcomer

and collected nonradioactive condensate water. The COPCs for the remedial action were developed in the Sampling and Analysis Plan.

Site Code: 100-D-56 Classification: Accepted

Site Names: 100-D-56, 100-D Area Sodium Dichromate ReClassification:

Underground Supply Lines

Site Type:Product PipingStart Date:Site Status:InactiveEnd Date:

Site The site is two abandoned 7.6-centimeter (3-inch) underground sodium dichromate supply lines that transported concentrated liquid sodium dichromate between the 108-D, 185-D, 189-D, 190-

D, 183-DR, and the 100-D Sodium Dichromate Transfer Station.

Waste Type: Equipment

Waste The waste is abandoned 7.6-centimeter (3-inch) pipe contaminated with sodium dichromate.

Description:

Site Code: 100-D-57 Classification: Rejected (5/31/2001)

Site Names: 100-D-57, Earth Crib Near 107-DR **ReClassification:**

Site Type: Crib Start Date: 1955

Site Status: Inactive End Date:

Site This site is a duplicate of 100-D-4, which has been excavated and closed out. Site 100-D-57 was

Description: initially identified from Drawing H-1-8630-DR, which shows an "Earth Crib" at an

unrecognizable, but short, distance off the southeast side of the 116-DR-9 Retention Basin. Through examination of Ground Penetrating Radar results, other documents, and excavations of the 116-DR-9, 100-D-4, and 100-D-49 sites, which effectively removed all soil and subsurface structures in this area, it has been determined that this site, 100-D-57, was created in error.

Site Code: 100-D-59 Classification: Accepted

Site Names: 100-D-59 French Drain at the 183-D Acid ReClassification: Rejected (1/30/2003)

Transfer Station

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site Status: Inactive End Dat

Site The site is an upright vitrified clay pipe adjacent to the acid transfer structure at the railroad tracks next to the 183-D Building. Pipes used to transfer the acids from the rail cars are still on the

next to the 183-D Building. Pipes used to transfer the acids from the rail cars are still on the structure, but the pipe sending overflow to the french drain has been disconnected (part of the

pipe has been removed).

The french drain is about 25 centimeters (10 inches) high, and 45 centimeters (18 inches) in diameter, with a steel cover and a 2.5-centimeter (1-inch) galvanized steel pipe rising up through

the steel cover.

Waste Type: Chemical Release

Waste

The waste disposed to the french drain was overflow sulfuric acid from railroad car transfer

Description: operations. Any waste acid would be neutralized in the alkaline Hanford soils.

Site Code: 100-D-60 Classification: Accepted

Site Names: 100-D-60, 100D River Effluent Pipelines, **ReClassification:**

100D River Lines, D Island, 100-D-60:1

Flumes

Site Type:Radioactive Process SewerStart Date:Site Status:InactiveEnd Date:

Site This site includes the river effluent pipelines (riverlines) that extend from the two outfalls in the **Description:** 100D area into the main channel of the Columbia River. The site also includes related

contamination on D Island, a small contaminated island that the pipelines pass through.

See subsite 100-D-60:1 for information on the flumes that were used to discharge effluent water when the river pipelines were blocked, damaged or undergoing maintenance.

The riverline extending from the 1904-D outfall is constructed of two 107-centimeter (42-inch) diameter reinforced concrete/steel pipes. The steel pipes have a 1.3-centimeter (1/2-inch) thick wall. The pipes extend approximately 400 meters (1300 feet) into the river, passing through D Island. The pipelines are buried along their entire run to a depth of 0.6 meters (2 feet) to 2.1 meters (7 feet). The outlets are not exposed on the river bed.

The riverline extending from the 1904-DR outfall is constructed of a 168-centimeter (66-inch) diameter carbon steel pipe with a 1.3-centimeter (1/2-inch) thick wall. The line also extends approximately 400 meters (1300 feet) into the river, passing through D Island. The pipeline is buried along its entire run to a depth of 0.6 meters (2 feet) to 1.8 meters (6 feet). The outlet is exposed on the river bed.

D Island is a small island located near the southeast shore of the Columbia River. The three effluent lines pass through the upstream end of the island and continue into the main river channel where they discharged. Small diameter pipe risers that previously extended from the buried effluent pipelines to several feet above the ground level of the island, ending in a "T," were removed to grade level between 1990 and 1994. These pipes had been the source of the cobalt-60 particulates found on the island.

Waste Type: Equipment

Waste The waste includes the pipelines and the contaminated scale contained within them.

Description:

SubSites:

SubSite Code: 100-D-60:1

SubSite Name: 100-D-60:1, Flumes from Outfall Structures 116-D-5 and 116-DR-5.

Classification: Accepted

ReClassification:

Description: A description of the two flumes follows:

The 116-D-5 flume has been filled and covered with soil from its origin to the shoreline. Approximately 6.1 to 9.1 meters (20 to 30 feet) is exposed during low Columbia River water

conditions at the shoreline.

The 116-DR-5 flume was filled and covered with soil from its point of origin at the outfall to the shoreline. A portion of the spillway is exposed during periods of low water in the river. The aviary cover and fence have been removed.

Site Code: 100-D-61 **Classification:** Accepted

Site Names: 100-D-61, Utility Pole and Fixture Debris **ReClassification:**

Piles

Dumping Area Site Type: Start Date: Inactive **Site Status: End Date:**

The site is a pile of debris tearing down of electrical utility poles. The site includes treated wood, Site

lead-tipped bolts, and miscellaneous other debris. **Description:**

Waste Type: Misc. Trash and Debris

Waste The waste includes creosote-treated wood poles and cross beams, wood pallets, metal debris,

Description: lead-tipped bolts and other debris.

Site Code: 100-D-63 Classification: Discovery

100-D-63, 100-D/DR Service Water **Site Names: ReClassification:**

Pipelines, 100-D/DR Clean Water Pipelines

Site Type: Product Piping Start Date: Site Status: Inactive **End Date:**

Site

Description:

Site Code: 116-D-1A Classification: Accepted

Site Names: 116-D-1A, 105-D Storage Basin Trench #1 **ReClassification:** Interim Closed Out (3/5/2001)

Start Date: Site Type: Trench 1947 **Site Status:** Inactive **End Date:** 1952

The site has been remediated and closed out. Site

Description:

Waste Type: Process Effluent

Waste The site received contaminated water and sludge from 118-D-6 Fuel Storage Basin. Records **Description:**

also show approximately 1,000 kilograms (1.1 tons) of sodium dichromate was disposed in this

trench.

Site Code: 116-D-1B **Classification:** Accepted

116-D-1B, 105-D Storage Basin Trench #2 **ReClassification:** Interim Closed Out (3/5/2001) **Site Names:**

Site Type: Trench **Start Date:** 1953 **End Date:** 1967 **Site Status:** Inactive

Site The site has been remediated and closed out.

Description:

Waste Type: Process Effluent

Waste Description:

The site received contaminated water and sludge from 105-D Fuel Storage Basin and liquid waste from the decontamination of fuel spacers and reactor hardware. Records show

approximately 700 kilograms (0.8 tons) of sodium dichromate, 2000 kilograms (2.2 tons) of sodium oxylate and 2000 kilograms (2.2 tons) of sodium sulfate were also disposed in this

trench.

Site Code: 116-D-2 Classification: Accepted

Site Names: 116-D-2, 105-D Pluto Crib, 116-D-2A ReClassification: Interim Closed Out (10/23/2000

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1956

Site This site has been closed out.

Description:

The crib was a 3 meter (10 feet) by 3 meter (10 feet) crib, 3 meters (10 feet) deep. The unit had

been shored with railroad ties and filled with sand.

Waste Type: Process Effluent

Waste The site received effluent water from isolated tubes containing ruptured fuel elements.

Description:

Site Code: 116-D-3 Classification: Accepted

Site Names: 116-D-3, 108-D Crib #1 ReClassification: No Action (1/30/2003)

Site Type: Crib Start Date: 1951
Site Status: Inactive End Date: 1967

Site Based on excavations, the review of site drawings, and ground penetrating radar, it has been

Description: determined that the 116-D-3 Crib is a duplicate number for site 116-D-4.

Waste Type: Process Effluent

Waste The site (a duplicate number for the 116-D-4 Crib) is a crib containing contaminated soil and rock. The site received low-level fission product wastes in contaminated wash water from the

108-D Shipping Cask Handling Facility.

Site Code: 116-D-4 Classification: Accepted

Site Names: 116-D-4, 108-D Crib #2 ReClassification: Interim Closed Out (10/23/2000

Site Type:CribStart Date:1951Site Status:InactiveEnd Date:1967

Site This unit has been remediated and closed out.

Description:

The site was a 2.4 by 2.4-meter (8 by 8-foot) crib, 5 meters (16 feet) deep.

Site 116-D-3 is an alias for this crib.

Waste Type: Process Effluent

The site was a crib containing contaminated soil and rock. The site received low-level fission Waste product wastes from contaminated maintenance shops in the 108 buildings. Assuming that H-1-**Description:**

3091 represents the correct information, the crib received wash water from the 108-D Shipping

Cask Handling Facility.

Site Code: 116-D-5 **Classification:** Accepted

Site Names: 116-D-5, 1904-D Outfall Structure **ReClassification:**

Start Date: 1944 **Site Type:** Outfall **Site Status:** Inactive **End Date:** 1975

Site

The outfall structure is an open, reinforced, compartmentalized concrete water box. The reactor **Description:** coolant effluent pipeline discharges into the upper chamber and flows through a bar grillwork to fall to a lower concrete box camber about 20 feet below. The discharge pipe to the river (100-D-60) is connected to the side wall of the lower chamber of the outfall structure. The inlet to the discharge pipe from the outfall structure is about 4 inches above the floor of the lower chamber. The Outfall Structures are open to the atmosphere (see photo) which allows rain and snow to collect in bottom 4 inches of the lower chamber. The Outfall Structure is enclosed with a chainlink security fence and an aviary exclusion mesh cover. The outfall is posted as a Contamination

Area.

Waste Type: Process Effluent

Waste This unit received reactor coolant water from the 107-D & 107-DR Retention Basins and waste

water from the 100-D Water Support Facilities including 183-D and 190-D. **Description:**

Site Code: 116-D-6 Classification: Accepted

116-D-6, 105-D Cushion Corridor French **ReClassification:** Interim Closed Out (11/8/2000) **Site Names:**

Drain

French Drain **Start Date: Site Type:** 1953 **Site Status:** Inactive **End Date:** 1967

This site has been remediated and closed out. Site

Description:

The waste site was a 1-meter (3.3-foot) diameter french drain, 1 meter (3.3 feet) deep covered by

approximately 1 meter (3.3 feet) of gravel and soil.

Waste Type: Water

Waste The site received domestic water from the changing room and water from the mask

Description: decontamination station. The site may have received chemical decontamination wastes and

solvents.

Site Code: 116-D-7 Classification: Accepted

Site Names: 116-D-7, 107-D Retention Basin, 107-D **ReClassification:** Interim Closed Out (8/15/2000)

Retention Basin **Start Date:** 1944 **Site Type: Site Status:** Inactive **End Date:** 1967

Site **Description:** The unit was an open concrete basin with a vertical concrete baffle constructed lengthwise in the middle of the basin. The floor consisted of concrete slabs, with joints originally closed with neoprene water seals. The walls sloped from the floor to a point 3 meters (10 feet) above the floor level with the remaining wall (approximately 3.0 meters [10 feet]) being vertical. The sloping wall sections were 10 centimeters (4 inches), and the vertical walls were reinforced construction with a minimum thickness of 0.3 meters (1 foot) at the top and 1.75 meters (5.75

feet) at the bottom.

Waste Type: Process Effluent

Waste **Description:** This site retained cooling water effluent from the 105-D Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Total radionuclide inventories in the vicinity of the basin ranged from 5 curies to over 400 curies. Seventy percent of the total radionuclide inventory was contained within the soil adjacent to the unit. Approximately 10 curies had leached into the concrete floor and walls.

Site Code: 116-D-9 **Classification:** Accepted

Site Names: 116-D-9, 117-D Crib, 117-D Seal Pit Crib **ReClassification:** Interim Closed Out (3/19/2001)

Crib Start Date: 1960 **Site Type: Site Status:** Inactive **End Date:** 1967

Site **Description:** This site has been remediated and closed out. The waste site and associated piping was excavated.

Site remediation began in 1999 and ended in 2000. The site was a crib and pipeline filled with gravel and covered to grade with clean soil. The surface was covered with cobbles, and a large

steel vent cap was located in the center.

Waste Type: Process Effluent

The site received drainage from the confinement system 117 Building seal pits. Waste

Description:

Site Code: 116-D-10 **Classification:** Accepted

Site Names: 116-D-10, 105-D Fuel Storage Basin **ReClassification:**

> Cleanout Percolation Pit, 105-D Fuel Storage Discharge Ponds, 105-D Ponds

1984 Pond **Start Date:**

Site Type: 1984 **Site Status:** Inactive **End Date:**

The unit consists of two open excavated pits with a crossover channel connecting them. The west Site excavation was 10.7 meters (35 feet) long, 6.7 meters (22 feet) wide, and 0.9 meters (3 feet) **Description:**

deep. The east excavation was 15.2 meters (50 feet) long, 7.3 meters (24 feet) wide, and 1.2 meters (4 feet) deep. Both pits have been back filled and graded to resemble the natural terrain.

Waste Type: Water

The unit received processed water from the 105-D Fuel Storage Basin. During the cleanout of Waste **Description:** this basin, the radiologically contaminated shielding water was processed through ion exchange columns. Before discharging the water to the unit, composite samples were taken to ensure that radionuclide concentrations were below release criteria in Table II of DOE Order 5480.1. No known hazardous substances were present in the water, however chemical analysis was not a standard practice during that period and there is no evidence that analyses were performed. It should be noted that water removed from the 1608-D is believed to be comparable to the storage basin water, and EP-TOX testing results for the 1608-D water were negative.

Site Code: 118-D-6 Classification: Accepted

Site Names: 118-D-6, 105-D Reactor Building ReClassification:

Site Type:ReactorStart Date:1944Site Status:InactiveEnd Date:1967

Site The unit consists of: 1) a reactor block, which includes the graphite moderator stack, biological

Description: and thermal shields, pressure tubes, and the safety and control systems; 2) the irradiated fuel

storage basin; and 3) contaminated portions of the reactor building.

Waste Type: Equipment

Waste This unit contains an estimated 21,500 curies of radionuclides, 85,000 kilograms (94 tons) of

Description: lead, and 2.8 cubic meters (100 cubic feet) of asbestos.

Site Code: 120-D-1 Classification: Accepted

Site Names: 120-D-1, 100-D Ponds ReClassification: Closed Out (8/27/1999)

Site Type:PondStart Date:1977Site Status:InactiveEnd Date:1994

Site The site was modified in 1979 to form a two-compartment pond, one overflowing to the other.

Description: The north pond was a percolation pond and the south pond was a settling pond.

Waste Type: Process Effluent

Waste This site received nonhazardous 183-D Sandfilter backwash, small quantities of filtered, chlorinated water from hydraulic test loops, and fuel discharge trampoline tests. The estimated

flow rate was 1.7E+05 liters/day (45,000 gallons/day). Corrosive demineralizer recharge effluent from two sources was released at intervals of once every 2 to 3 years for one regenerate source and once every 6 years for the other. Sampling indicates the potential for mercury and

polychlorinated biphenyl (PCB) contamination.

Site Code: 120-D-2 Classification: Accepted

Site Names: 120-D-2, 186-D Waste Acid Reservoir ReClassification:

Site Type: Surface Impoundment Start Date:

Site Status: Inactive End Date: 1979

Site The unit was constructed of acid-proof brick, 3-ply waterproof membrane, vitrified pipe, #8 lead

Description: flashing, and gunnite. The sides of the reservoir were sloped 2:1 from 1.5 meters (5 feet) below grade level to the bottom. As of June 21, 1991 the site area was covered with gravel and annual

weeds. No evidence remains on the surface of the building structure. There are two brick

manholes and a soil depression that may also be associated with this site.

Waste Type: Chemicals

Waste This unit was never used for waste acid storage. No records have been found documenting the

Description: disposal of waste of any kind in this facility. No written documentation has been found

concerning the disposal of the lead flashing that was used in the construction of the waste acid reservoir; however, it is assumed that the lead flashing was disposed in-situ during the

demolition of the 186-D Facility.

Site Code: 126-D-1 Classification: Accepted

Site Names: 126-D-1, 184-D Powerhouse Ash Pit, 188- ReClassification: Rejected (6/25/1998)

D Ash Disposal Area, 100-D Ash Disposal

Basin

Site Type: Coal Ash Pit Start Date: 1950
Site Status: Inactive End Date: 1960

Site The 126-D-1 site is a large ash disposal area. The site was originally a large excavated basin

Description: approximately 60 meters (200 feet) long, 60 meters (200 feet) wide, and 3 meters (10 feet) deep.

The extent of the original basin obscured by ash piles.

Waste Type: Ash

Waste This site received an unknown amount of coal ash that was sluiced to pits with raw river water

Description: from the 184-D Powerhouse. The ash has been determined by testing in accordance with WAC

173-303 to be nonextraction process (EP) toxic.

Site Code: 126-D-2 Classification: Accepted

Site Names: 126-D-2, 184-D Coal Pit ReClassification:

Site Type: Inert/Demolition Landfill Start Date: 1943
Site Status: Inactive End Date: 1986

Site The site is an excavated pit that was originally used to store coal for the 184-D Power House and

Description: later used as a demolition and inert waste landfill. This unit is full of debris. It has been covered

with about 0.3 meters (1 foot) of pit run backfill material and graded to conform with the natural

terrain.

Waste Type: Demolition and Inert Waste

Waste The unit contains demolition and inert waste from demolished facilities in and around 100-D.

Description: This includes debris from 184-D (including stacks), 108-D, released portions of the 115-D/DR,

and 186-D. The site is suspected to contain some radioactively contaminated solid wastes. Potential contaminates include: Chromate, lead, undetermined organic and inorganic chemicals

Waste Type: Chemicals

Waste The site is known to contain paint cans and paint wastes, solvents, acids, dry chemicals, photo

Description: chemicals, and herbicide cans.

Waste Type: Asbestos (friable)

Waste Asbestos containing waste has been disposed of at this site.

Description:

Site Code: 126-D-3 Classification: Accepted

Site Names: 126-D-3, D Area Brine and Salt Dilution ReClassification: Rejected (10/2/1997)

Pits, 184-D Salt Dissolving Pit and Brine

Pump House

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site Description:

The salt dissolving pits and brine pump pit were part of a single below-grade concrete structure that provided brine for the 184-D Powerhouse. The structure has been demolished and buried in situ. No evidence of the site remains at the surface.

The two salt dissolving pits each had inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.8 meters (9.25 feet) tall. They had a design high water line 2.4 meters (7.75 feet) from the pit bottom. An overflow slot connecting the two dissolving pits was located 0.3 meters (1 foot) above the high water line. The bottom of each pit was filled with a 12.7 centimeter (5 inch layer) of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The dissolving pits each had a 2.4 meter (8 foot) by 0.9 meter (3 feet) opening at the top for receiving salt. Each pit had a capacity of 23,600 kilograms (52,000 pounds) of salt.

The brine pump pit is located adjacent to the two salt dissolving pits. The pit was 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.1 meters (7 feet) deep. It held two pumps and associated piping (all brass) for the brine system. The floor of the pump pit sloped toward a 46 by 46 centimeter (18 by 18 by 18 inch) sump in a corner.

Waste Type: Demolition and Inert Waste

Waste The structure was demolished and buried in situ.

Description:

Site Code: 128-D-2 Classification: Accepted

Site Names: 128-D-2, 128-D-2 Burn Pit ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Description:

Site

The site is a large landfill area that shows evidence of surface burning and has no definite boundaries. The site is marked with signs of plant stress, depressions, and berms. Concrete and metallic debris exposed on the surface indicate the possibility that this site was also used as a solid waste landfill. The following were also noted during the March 31, 1999, visit: rigging equipment, bricks, and unidentified white powder that may be ash, and a north-south running trench. The site has been used as a disposal site for compacted tumbleweeds collected from area fences. Knapweed was noted during the March 1999, walkdown.

Waste Type: Misc. Trash and Debris

Waste Some pieces of non-contaminated reactor hardware and graphite blocks were found at the site.

Description:

Site Code: 130-D-1 Classification: Accepted

Site Names: 130-D-1, 1716-D Gasoline Storage Tank, **ReClassification:**

1706-D Gasoline Storage Tank

Site Type:Storage TankStart Date:1944Site Status:InactiveEnd Date:1968

Site The unit was a steel underground storage tank with a capacity of 15,140 liters (4000 gallons).

Description: During the April 1999 visit, no evidence of the site could be found except for some soil gas

probes left from D. Jacques' investigation. The concrete marker mentioned in the Technical Baseline Report could not be found at either the coordinates mentioned in that document or at the

site's mapped location.

Waste Type: Oil

Waste The unit was used for storage of leaded gasoline (product).

Description:

Site Code: 132-D-1 Classification: Accepted

Site Names: 132-D-1, 115-D/DR Gas Recirculating **ReClassification:**

Facility

Site Type:Process Unit/PlantStart Date:1944Site Status:InactiveEnd Date:1967

Site Presently, the site looks like a gravel parking lot and is free of debris. The unit consisted of the **Description:** building, the vacuum and pressure seal pit, and tunnels. The building was a single-story,

reinforced concrete structure, 6.1 meters (20 feet) high, with a basement. At ground level, an operating gallery ran the length of the building and was flanked on either side by cells that contained the gas processing equipment. The cells, including walls, ceilings and floors, were constructed of reinforced concrete slabs with composition surfaces. At right angles to the operating gallery and extending across the full width of the building's end, the fan room was constructed of concrete block and contained the ventilation fan, air compressor, office, locker room, etc. At each end of the basement, a tunnel containing the gas recirculating piping lead to the reactors. The tunnel to 105-D was 3.7 meters (12 feet) wide by 2 meters (6.5 feet) high. The tunnel to 105-DR was 1.5 meters (5 feet) wide. Connected to and part of the 105-D tunnel was

the vacuum and pressure seal pit. The tunnel also formed part of the 1608-D Lift Station.

Waste Type: Demolition and Inert Waste

Waste The resident radionuclides are tritium, carbon-14, cobalt-60, strontium-90, cesium-137,

Description: europium-152, and plutonium-239.

Site Code: 132-D-2 Classification: Accepted

Site Names: 132-D-2, 117-D Filter Building **ReClassification:**

Site Type:Process Unit/PlantStart Date:1961Site Status:InactiveEnd Date:1967

The ventilation exhaust filter building housed blowers and particulate filters used to treat the ventilation exhausted from the 105-D Reactor Building. Included in this site are the 117-D

Building, the intake ventilation duct from the 105-D Reactor Building, and the exhaust ventilation

ducts to the 116-D Reactor Exhaust Stack. The building and ducts have been demolished in place and the site now resembles a gravel parking lot.

The building and below grade duct work were made of reinforced concrete, 0.3 to 0.6 meters (1 to 2 feet) thick. The building was 11.0 meters (36 feet) high with 2.4 meters (8 feet) above grade. A soil berm was built up around the building from grade level to the top of the structure.

The building was divided into two large filter cells with a smaller operating area between them. The filter cells each held six filter frames (two wide and three deep). The filter frames were designed to hold twenty-eight filters that were 0.6 meters (2 feet) square by 0.3 meters (1 foot) thick. There were spaces between the frames to allow access for filter maintenance. The operating area between the two cells was divided into two levels. The upper level, called the access gallery had ten doors that led from it. Four doors opened into each of the filter cells and the two other doors provided access to the intake and exhaust ducts. The operating gallery was located below the access gallery. A sump was located at each end of the operating gallery to collect incidental drainage from above. A large open area extended the full length of the structure above the access gallery and the filter cells. It ranged in height between 2.5 and 2.4 meters (8.1 and 7.8 feet) due to the structure's sloping roof. The space provided access to the cement cover blocks that were positioned over each of the filter frames.

Waste Type: Demolition and Inert Waste

Waste Description:

The site contains radiological contamination from 105-D Reactor ventilation exhaust. Total radionuclide inventory in the 117-D building was estimated to be 3.9E-03 curies. The

radionuclides comprising this figure are tritium, carbon-14, cobalt-60, strontium-90, cesium-137,

europium-152, and plutonium-239.

Site Code: 132-D-3 Classification: Accepted

Site Names: 132-D-3, 1608-D Waste Water Pumping **ReClassification:**

Station, 1608-D Effluent Pumping Station

ning Station

Site Type:Pump StationStart Date:1944Site Status:InactiveEnd Date:1965

Site Description:

Prior to decommissioning, the structure extended 1.2 meters (4 feet) above grade and 9.8 meters (32 feet) below grade. The walls and floor were constructed of reinforced concrete and the roof

was constructed of a wood frame with composition surface. The facility included an

accumulation sump, which supplied three separate sumps.

Waste Type: Process Effluent

Waste Description:

This unit received water from reactor building drains containing trace amounts of low-level radionuclides and decontamination chemicals. Radionuclides were primarily miscellaneous

fission and activation products. The decontamination chemicals consisted of sodium fluoride,

oxalic acid, and citric acid.

Waste Type: Demolition and Inert Waste

Waste Description:

Site Code: 132-D-4 Classification: Accepted

132-D-4, 105-D Reactor Exhaust Stack, **Site Names:**

116-D Reactor Exhaust Stack

ReClassification:

Site Type: Stack **Start Date:** 1944 **Site Status:** Inactive **End Date:** 1967

Site The stack has been demolished. The unit was a monolithic structure constructed of reinforced concrete. The maximum wall thickness was 0.46 meters (1.5 feet) at the base. It rested on a **Description:**

double octagon-shaped base that extended 5.3 meters (17.5 feet) below grade. An opening at the base provided access to its interior portion. This opening was fitted with a steel door. The

outside rungs had been removed to about 3 meters (10 feet) above grade.

Waste Type: Demolition and Inert Waste

Waste This unit was used to exhaust confinement air that originated from the work areas in the 105-D

Reactor Building. The interior of the stack contains an unknown quantity of low-level **Description:**

radioactive materials

1607-D2 **Site Code: Classification:** Accepted

Site Names: 1607-D2, 1607-D2 Septic Tank and **ReClassification:**

Associated Drain Fields, 124-D-2, 1607-D2 Sanitary Sewer System, 1607-D2 Septic

Tank

Site Type: Septic Tank **Start Date:** 1944 **End Date:** 1996 **Site Status:** Inactive

The 1607-D2 Septic System has been divided into four sub-sites: The 1607-D2:1 Abandoned Site **Description:** Tile Field; 1607-D2:2 Replacement Tile Field, 1607-D2:3 Septic Pipelines, and 1607-D2:4 Septic

Tank. This site was broken into sub-sites to allow for close out of each part as remediation

progressed in the area.

As of November 2000, three of the four subsites have been remediated and are no longer

identifiable in the field.

Waste Type: Sanitary Sewage

This unit received sanitary waste from office, maintenance services, and process water pumping Waste **Description:**

buildings (190-DA, 189-D, 185-D, 182-D, 183-D, 170-D, and 105-D). The flow rate to this unit

was estimated at 4,640 liters/day (1,225 gallons/day). There were several clay brick access

manholes associated with this septic system located throughout the 100-D Area.

SubSites:

1607-D2:1 **SubSite Code:**

SubSite Name: 1607-D2:1, Original 1607-D2 Tile Field, Eastern 1607-D2 Tile Field

Classification: Accepted

ReClassification: Interim Closed Out

Description: The 1607-D2:1 Abandoned Tile Field is a sub-site associated with the 100-D Area sanitary

> sewage system. The tile field consisted of a clay pipe drain field positioned approximately 1 to 2 meters (3.3 to 6.6 feet) below surrounding grade. A thick layer of aggregate and native sandy gravel soils were placed around the clay pipes. The 1607-D2:1 site was created in

1944, and sewage liquid from the 553-person-capacity 1607-D2 septic tank discharged to the tile field from 1944 to 1950. The septic tank was designed to capture the solids, and the decant liquid effluent was transported to the tile field. Solids and sludge were retained in the 91,500-liter (24,160-gallon) septic tank (the septic tank is subsite 1607-D2:4).

In 1950 the tile field was partially demolished for the construction of the 116-DR-9 Liquid Effluent Retention Basin, and a replacement tile field (subsite 1607-D2:2) was constructed north of the retention basins. The name "abandoned tile field" was assigned to the infrastructure remaining and adjacent to the 116-DR-9 retention basin. The approximate area of the abandoned tile field sub-site is approximately 1,203 square meters (12,949 square feet). The septic pipelines for this system are subsite 1607-D2:3.

Part of the original tile field was removed during the construction of the retention basin. In December 1997 and January 1998, the remaining tiles of the eastern tile field (subsite 1607-D2:1) were removed and disposed of in the Environmental Restoration Disposal Facility along with the sludge trenches (100-D-4 and 100-D-22).

Excavation of the 1607-D2:1 site began on January 8, 1998, by removing the overburden materials, contaminated soil, and the engineered structure (i.e., clay tiles and aggregate). This first excavation effort removed approximately the top 2 meters (6.6 feet) of soil. All overburden material was found to be contaminated based on field screening results and was disposed of at the ERDF with other contaminated material. Contamination was encountered at the base of the first excavation (i.e., below the engineered structure elevation) based on field screening results. A second excavation effort was initiated on January 9, 1998, and was completed on February 4, 1998. The site was judged to be clean based on field screening results. Cleanup verification sampling was initiated at the final excavation elevation of 131.6 meters (431.8 feet).

Based on the sample results from investigation of the 1607-D2 septic tank contents and the immediately adjacent 107-D1 Sludge Pit, the waste site contaminants of concern (COCs) include the following: europium-152, uranium-235, uranium-238, hexavalent chromium, lead, mercury, bis (2-ethylhexyl) phthalate, and polychlorinated biphenyls (PCBs).

During excavation of the overburden materials, field screening was used to distinguish between potentially clean materials and contaminated materials for disposal at the ERDF. The field screening results indicated that all removed overburden material did not meet direct exposure RAGs. The overburden material was disposed of at the ERDF.

For the exposed surface of the excavation, initial confirmation sampling and testing using gamma energy analysis (GEA) were performed to determine the number of final verification samples.

At the completion of the remedial action, the area of the excavation was approximately 1,203 square meters (12,949 square feet) at a depth of 3.4 meters (11 feet), and approximately 10,040 metric tons (11,064 tons) of material from the site were disposed at the ERDF. The excavation will be backfilled in the near future with clean fill materials to the reference grade of El. 135 meters (443 feet). Clean backfill will be taken from Borrow Pit 21, which is located due south of the 1607-D2:1 site. The material in the borrow pit has been surveyed in accordance with the SAP (DOE-RL 1998) and is appropriate for use as backfill.

SubSite Code: 1607-D2:2

SubSite Name: 1607-D2:2, Replacement 1607-D2 Tile Field, Northern Tile Field

Classification: Accepted

ReClassification:

The tile field that replaced the original tile field is located north of 116-D-7 Retention Basin, **Description:**

north of the 100-D Area perimeter road.

SubSite Code: 1607-D2:3

SubSite Name: 1607-D2:3, Septic Pipelines

Classification: Accepted

ReClassification: Interim Closed Out

This section of the sanitary sewer pipelines runs from Manhole S-250, through the 1607-D2 **Description:**

Septic Tank, and from there to the D Area North Perimeter Road. It has been removed.

The final COCs for the 1607-D2 septic pipelines are: cesium-137, cobalt-60, europium-152, total chromium, hexavalent chromium, mercury, and lead.

Remedial action at the 1607-D2 pipeline site began on August 20, 1999. Excavation of the site involved removing the overburden materials, the contaminated structure, and the underlying contaminated soil. Based on field screening, overburden materials identified as potentially clean were placed in stockpiles for potential use as backfill. Materials that were found to be contaminated were disposed of at the ERDF. On August 30, 1999, the excavation reached the design limit at El. 131 meters (430 feet).

At the completion of remedial action and removal of the engineered structure, the shallow zone excavation was approximately 1,780 square meters (19,200 square feet) in area with a maximum depth of approximately 4.6 meters (15 feet). The overburden area was approximately 1,850 square meters (19,900 square feet). Cleanup verification sampling was conducted on December 9, 1999. The excavation has been backfilled to the reference grade of El. 136 meters (445 feet). Backfill was taken from the clean stockpile and/or from other sources of clean material surveyed in accordance with the SAP (DOE-RL 1998) and that are appropriate for use as backfill.

SubSite Code: 1607-D2:4

SubSite Name: 1607-D2:4, 1607-D2 Septic Tank

Classification: Accepted

ReClassification: Interim Closed Out

Description: Excavation of the 1607-D2:4 Septic Tank began on July 17, 1998, by removing the soil

> surrounding the septic tank and breaking in place the cover and sides of the tank prior to drying and sampling sludge. The tank cover, side walls, and excavated soil were contaminated and disposed at ERDF. The sludge was tested for free liquids using the paint

filter test. The second phase of the excavation continued in late October 1998, with additional soil being disposed of at ERDF. Approximately 2,041 metric tons (2,250 tons) of

material from the site were disposed at ERDF.

Based on the sample results from investigation of the 1607-D2 septic tank contents, the waste site contaminants of concern are europium-152, total chromium, lead, mercury, and bis (2-

ethylhexyl) phthalate.

Site Code: Classification: 1607-D4 Accepted

ReClassification: 1607-D4, 1607-D4 Septic Tank and **Site Names:**

Associated Drain Field, 124-D-4, 1607-D4 Sanitary Sewer System, 1607-D4 Septic

Tank

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1968

Site Description:

of reinforced concrete, and has a 6-person capacity (130 liters [35 gallons] per capita) with an average detention period of 24 hours. The walls are 20 centimeters (8 inches) thick, and the floor is 15 centimeters (6 inches) thick. The tile field is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a minimum of 2.4 meters (8 feet) per capita. The laterals are open jointed and spaced 2.4 meters (8 feet) apart.

The unit is a septic tank and tile field. The tank is 2.5 meters (8 feet 4 inches) deep, constructed

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary waste from the 115-D Gas Recirculation

Description: Building.

Site Code: 1607-D5 Classification: Accepted

Site Names: 1607-D5, 1607-D5 Septic Tank and **ReClassification:**

Associated Drain Field, 124-D-5, 1607-D5 Sanitary Sewer System, 1607-D5 Septic

Tank

Site Type: Septic Tank Start Date: 1944

Site Status: Inactive End Date:

Site The site resembles a gravel covered parking area. There are no signs designating the septic and

Description: tile field areas.

Waste Type: Sanitary Sewage

Waste This unit received sanitary waste from the 181-D Pumphouse. The flow rate to this unit was

Description: estimated at 35 gallons per day (130 Liters per day).

Site Code: 116-DR-1&2 Classification: Accepted

Site Names: 116-DR-1&2, 107-DR Liquid Waste ReClassification: Interim Closed Out (9/26/2000)

Disposal Trench #1, 107-DR Liquid Waste Disposal Trench #2, 116-DR-1, 116-DR-2

Trench Start Date: 1950

Site Status: Inactive End Date: 1967

Site The site has been remediated and closed out. It is no longer marked or posted.

Description:

Site Type:

The site was constructed of two trenches that were later joined together to form a single trench.

Waste Type: Water

Waste The site received effluent from the 107-D and 107-DR Retention Basins when cooling water was contaminated due to ruptured fuel elements. In addition to the 4.0E+07 liters (1.06E+07 gallons)

of effluent from ruptured fuel elements listed in PNL-6456 (Stenner et al), the site also received

3.87E+08 liters (1.02E+08 gallons) of cooling effluent daily during the four month test.

Waste site COCs identified through process knowledge are listed in the 100 Area Remedial Action Sampling and Analysis Plan (DOE-RL 1998a). The COCs identified for this site are: americium-241, cobalt-60, cesium-137, europium-152, europium-154, europium-155, nickel-63, plutonium-238, plutonium-239/240, strontium-90, and hexavalent chromium.

Site Code: 116-DR-5 **Classification:** Accepted

Site Names: 116-DR-5, 1904-DR Outfall Structure, **ReClassification:**

1904-DR

Start Date: 1956 **Site Type:** Outfall Inactive **End Date:** 1967 **Site Status:**

The outfall has been backfilled. There is an exposed manhole cover in the northwest corner of the **Description:**

site that may provide access to the river pipelines. The site is posted as an Underground

Radioactive Material area.

The unit was an open, reinforced, compartmentalized concrete water box that routinely discharged effluent to the Columbia River via the river effluent pipelines ((100-D-60). When the river pipelines were blocked, damaged or undergoing maintenance, the flow was diverted to a concrete overflow spillway (flume) (100-D-60:1).

Waste Type: Process Effluent

Waste This unit received reactor coolant from the 107-D and 107-DR Retention Basins.

Description:

116-DR-9 Classification: **Site Code:** Accepted

116-DR-9, 107-DR Retention Basin, 107-**ReClassification:** Interim Closed Out (1/6/2000) **Site Names:**

DR

Site Type: Retention Basin **Start Date:** 1950 **End Date: Site Status:** Inactive 1967

This site has been remediated and closed out. Site

Description:

Waste Type: Process Effluent

Waste This site received cooling water effluent from the 105-DR Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Total radionuclide inventories in the **Description:** vicinity of the basin ranged from 5 curies to over 400 curies. Seventy percent of the total radionuclide inventory is contained within the soil adjacent to the unit. Approximately 10 curies

have leached into the concrete floor and walls. The basin was known to have leaked on several occasions.

628-3 **Site Code: Classification:** Accepted

Site Names: 628-3, 628-3 Burn Pit **ReClassification:**

Site Type: Burn Pit **Start Date: Site Status:** Inactive **End Date:**

Site The site is roughly oval. The center is distinguished by a 1.2-meter (4-foot) depression. The

Description: depression shows signs of severe plant stress and soil discoloration. The depression, as well as

the area around it, is littered with debris. It appears that at one time cat tractors bulldozed some

of the surrounding soil.

Waste Type: Misc. Trash and Debris

Debris, consisting mostly of burnt wood, nails, metal pipes, rebar, and glass, is scattered over the Waste **Description:**

area. In some spots, the site also contains what looks like friable and nonfriable asbestos. The

site could not definitely be found in 1992 surveys of the area.

Site Code: UPR-100-D-1 **Classification:** Accepted

Site Names: UPR-100-D-1, Oil Soaked Soil **ReClassification:**

Site Type: Unplanned Release **Start Date: End Date: Site Status:** Inactive

Site The site is an unplanned release that appears as a small depression surrounded by oil

contaminated soil. During the March 1999 visit, a buried pipe was observed to the south of the **Description:**

stained soil.

Oil Waste Type:

Waste The source of the oil could not be determined. However, the volume appeared to be small.

Description:

Site Code: UPR-100-D-2 Classification: Accepted

Site Names: UPR-100-D-2, Effluent Line Leak #1 **ReClassification:** Interim Closed Out (9/26/2000)

Site Type: Unplanned Release **Start Date:** 1951

Inactive **End Date: Site Status:**

This release was remediated with the source pipelines (100-D-48 and 100-D-49) and closed out Site

Description: on September 26, 2000.

Waste Type: Water

The site received radioactively contaminated water from the 107-D/DR Retention Basins. Waste

Description:

UPR-100-D-3 **Site Code: Classification:** Accepted

Site Names: UPR-100-D-3, Effluent Line Leak #3 **ReClassification:** Interim Closed Out (9/26/2000)

Unplanned Release **Start Date:** 1951 Site Type:

Site Status: Inactive **End Date:**

Site This site was remediated with the source pipelines and closed out on September 26, 2000,

Description:

Waste Type: Water

The site was soaked with radioactively contaminated reactor cooling water from the 107-DR Waste

Description: Basin. Site Code: UPR-100-D-4 Classification: Accepted

Site Names: UPR-100-D-4, Unplanned Release: 107-D ReClassification: Interim Closed Out (3/26/2001)

Basin Leaks

Site Type: Unplanned Release Start Date: 1950

Site Status: Inactive End Date:

Site The site was on the north side of the 107-D Basin, between the basin and the river.

Description:

Waste Type: Water

Waste The site was soaked with radioactively contaminated reactor cooling water effluent.

Description:

Site Code: UPR-100-D-5 Classification: Accepted

Site Names: UPR-100-D-5, Effluent Line Leak #4 ReClassification:

Site Type: Unplanned Release Start Date: 1951

Site Status: Inactive End Date:

Site In 1951, the area was marked with a rope fence and posted as a radiation area. Today the area

Description: can not be separately distinguished in the gravel retention basin area.

Waste Type: Water

Waste The site received radioactively contaminated effluent from reactor cooling water.

Description:

100-DR-2

Site Code: 100-D-11 Classification: Rejected (8/27/1997)

Site Names: 100-D-11, Temporary Garage and Gasoline **ReClassification:**

Dispensing Station, Temporary Garage TC-

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1950

Site

Description:

Waste Type: Oil

Waste This site has the potential for soil contamination from gasoline, oil, and engine coolant.

Description:

Site Code: 100-D-12 Classification: Accepted

Site Names: 100-D-12, Sodium Dichromate / Acid ReClassification: Interim Closed Out (10/23/2000

Railcar and Truck Unload Station and Associated French Drain, Undocumented

Liquid Waste Site

Site Type: Pump Station Start Date:

Site Status: Inactive End Date:

Site The site has been remediated and was closed out on October 23, 2000. It is no longer marked or

Description: posted.

An underground line allowed solutions to be pumped to storage tanks. Before remediation, the site appeared as a small concrete pad with an adjacent 0.9 meters (3 feet) diameter concrete pipe french drain that supported the flushing and draining of lines that were connected to railroad tank

cars.

Waste Type: Chemical Release

Waste Wastes consisted of sodium dichromate and sulfuric acid.

Description:

Site Code: 100-D-13 Classification: Accepted

Site Names: 100-D-13, Unnumbered Septic System A, ReClassification:

Septic Tank D-13, 100 DR Area Sewage Disposal Unit.124-DR-3, 1607-DR3

Site Type:Septic TankStart Date:1947Site Status:InactiveEnd Date:1949

Site The site is a septic system installed for use during the construction of the 105-DR Reactor. The

Description: system consisted of an IMHOFF tank, a chlorination house, a dosing tank, a filter bed, and

associated piping. Most of the system remains in place, except for the chlorination house which has been removed. The septic tank is surrounded by a steel pipe fence. The filter bed is

distinguishable as a rock-filled depression with distribution piping visible on the surface.

The IMHOFF tank is a reinforced concrete structure with overall dimensions of 7.9 meters (25.9 feet) long, 3.8 meters (12.3 feet) wide, and 7.3 meters (24 feet) deep. The tank is divided lengthwise into three equally sized chambers. A single 15-centimeter (6-inch) pipe passes through the bottom of the partitions that separate the chambers. An influent flume connected to the first chamber controls and distributes flow from the incoming 30-centimeter (12-inch) line. An effluent flume connected to the third chamber controls flow into the 20-centimeter (8-inch) discharge line. A small line from a nearby chlorination house entered at the effluent flume and chlorinated the waste prior to discharge from the tank.

The dosing tank is connected to the IMHOFF tank by the 20-centimeter (8-inch) discharge line. The dosing tank is constructed of reinforced concrete. It has surface dimensions of 3.1 meters (10.25 feet) long by 1.7 meters (5.67 feet) wide. It controlled the flow of waste into the adjacent filter bed.

The filter bed is a 3.0-meter (10-foot) deep excavation measuring 21.3 meters (70 feet) by 21.3 meters (70 feet) at the surface and 12.2 meters (40 feet) by 12.2 meters (40 feet) at the base. The excavation was filled with 2.5 to 5-centimeter (1 to 2-inch) gravel. A main discharge line with six laterals (three on each side) lies on top of the gravel fill. Sprinkler heads that were tapped into the laterals distributed the treated sewage across the surface of the filter bed.

Sanitary Sewage Waste Type:

Waste **Description:** The tank received sanitary waste from temporary construction facilities at 105-DR. The 100-D Area Technical Baseline Report indicates that the tank also received overflow from the high tanks (water towers) at 105-DR, but no drawings could be found to verify this. The tank may have also received waste from the 105-DR Reactor (see Site Comment), so radioactive contamination may be present.

Site Code: 100-D-14 **Classification:** Accepted

100-D-14, Unnumbered Septic Tank #2, **Site Names: ReClassification:**

Unnumbered Septic System (b)

Site Type: Septic Tank **Start Date: Site Status:** Inactive **End Date:**

The site appears as a vegetation-covered field. A small depression may indicate the presence of Site **Description:** the tank. A 10-centimeter (4-inch) cement pipe is likely to be a vent pipe to the drain field. The

site is adjacent to a small soil pile.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastes.

Description:

Site Code: 100-D-15 **Classification:** Accepted

Site Names: 100-D-15, Debris North of 100-D Area **ReClassification:**

Perimeter Road and Debris South of 100-D

Perimeter Road - within 100-D-55, Gravel

Pit #2, Pit 21

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

Site Description:

The 100-D-15 Site is two separate areas containing debris. Both are located south of 100-D Area near the perimeter road. One area is on the north side of the 100-D Perimeter Road. The other area is on the south side of the 100-D Perimeter Road, inside Gravel Pit #21. The northern pit has been mostly backfilled with construction-type debris. The southern pit (inside Gravel Pit 21) has been partially backfilled and contoured.

Waste Type: Construction Debris

Waste Description:

The southern pit contains construction debris including concrete, metal, asphalt, and other debris. Asbestos may be present. The exact contents of the debris is unknown. In August 1994, Kaiser Engineers Hanford (KEH) removed sediments from the 182-D River Water Basins and deposited the material in the east end of the pit over part of the existing waste site. This disposal option was chosen rather than the demolition landfill option because the sediment did not meet the demolition landfill acceptance criteria. In a memo (February 14, 1995), R. Haggard (Air and Water Services) determined that the material classifies as "clean soils or clean dredge soils" as defined in Washington Administrative Code (WAC) 173-304 definition that "Clean soils or clean dredge soils" means soils which are not dangerous waste or problem wastes. This classification excludes material from regulation and requires no specific management or disposal requirements. Therefore, there is no requirement to dispose of the material in any type of permitted landfill.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

The northern pit is assumed to be the older of the two pits. The pit has been reported to have been used as a disposal site for empty cans collected from army sites located northeast of the 100-D Area. Army wastes could include oil cans, solvent cans, and other miscellaneous solid wastes. Asbestos may be present. The exact contents of the debris is unknown.

Site Code: 100-D-17 Classification: Accepted

Site Names: 100-D-17, Burn Pit, Undocumented Solid ReClassification: Rejected (8/27/1997)

Waste Site

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site is a burn pit that is visible in 1948 photos (#901 and #922). The site now appears as a

Description: large, vegetation covered field. There are no features that clearly identify the site.

Waste Type: Construction Debris

Waste The site likely contains burned construction debris.

Description:

Site Code: 100-D-23 Classification: Accepted

Site Names: 100-D-23, 119-DR Sample Building **ReClassification:**

Drywell

Site Type: French Drain Start Date: 1959

Site Status: Inactive End Date:

Site The site is a drywell that received drainage from a floor drain in the 119-DR Sample Building.

Description: The 119-DR Sample Building Drywell was connected to the facility by a 5-centimeter (2-inch)

drainage pipe buried at least 0.9 meters (3 feet) below grade. A 1.9-centimeter (3/4-inch) drain

line from the building's evaporative cooler connected into the 5-centimeter (2-inch) drain line near the southern edge of the building.

Waste Type: Process Effluent

The drain received effluent from the building's evaporative cooler. It is likely that the drain also Waste

received sample waste and janitorial waste since the building had no other drains or connections **Description:**

to the process sewer system.

Site Code: 100-D-27 **Classification:** Accepted

100-D-27, 151-D Substation UPR, A-2 **Site Names: ReClassification:**

Substation Transformer #A401C Leak

Start Date: Site Type: Unplanned Release **Site Status: End Date:**

The site is an unplanned release within the 151-D Substation. The substation is surrounded by a Site

chain-link fence. **Description:**

Inactive

Oil Waste Type:

The release was less than 100 gallons (380 L) of non-PCB mineral oil. According to a Waste **Description:** transformer inventory, oil in the #A401C transformer contains 42.0 parts per million PCBs.

Site Code: 100-D-28 **Classification:** Accepted

Site Names: 100-D-28, 190-DR Building Septic System **ReClassification:**

Site Type: Septic Tank **Start Date: Site Status: End Date:** Inactive

Site A septic tank and drainfield was discovered during research activities for the 107-D Retention

Basins. The system includes a 2,730-liter (720-gallon) steel tank and a vitrified clay pipe drain **Description:**

field, due west of the septic tank. See Drawing H-1-9933-DR.

Waste Type: Sanitary Sewage

The system received sanitary wastes. Waste

Description:

Site Code: 100-D-36 Rejected (8/27/1997) **Classification:**

Site Names: 100-D-36, Undocumented Concrete Pad, **ReClassification:**

Monitoring Station 1614-D-1, 100-N-20

Site Type: Foundation **Start Date: Site Status:** Inactive **End Date:**

The site is a 1.8 meter by 1.8 meter (6 foot by 6 foot) concrete pad with anchor bolts set in the Site

surrounding edges. **Description:**

Site Code: 100-D-37 Rejected (8/27/1997) **Classification:**

Site Names: 100-D-37, Undocumented Concrete Pad,

1614-D-3 Monitoring Station

ReClassification:

ReClassification:

Site Type:FoundationStart Date:Site Status:InactiveEnd Date:

Site The site is a 1.8 meter by 1.8 meter (6 foot by 6 foot) concrete pad with anchor bolts set in around

Description: the outer edges.

Site Code: 100-D-40 Classification: Accepted

Site Names: 100-D-40, Minor Construction Burial

Ground #5 Hole

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site The burial ground appears as a field with vegetation growing on the surface. During the March

Description: 31, 1999, visit, there was no visible evidence of the burial ground. The site was a 12-meters (40-

foot) diameter hole dug to receive reactor waste.

Waste Type: Equipment

Waste The burial ground was dug to receive contaminated material and equipment from the 105-D

Description: Reactor Building. Potential contaminates include: Co-60, Ni-63

Site Code: 100-D-43 Classification: Accepted

Site Names: 100-D-43, Buried VSR Thimble Site, **ReClassification:**

Burial Ground 4C, 118-D-4C

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site The site is a solid waste burial ground. The burial ground is in very close proximity to the 152-

Description: centimeter (60-inch) effluent lines.

Waste Type: Equipment

Waste Description:

The waste is a buried Vertical Safety Rod (VSR) thimble. The VSR thimbles were made of aluminum similar to the that used in the process tubes and should contain similar isotopic composition. Sampling of process tubes was conducted in March 1967. The radionuclide levels, when decay corrected by Dorian and Richards to March 1977, were 5.9E+03 picocuries of manganese-54 per gram of aluminum and 2.5E+07 picocuries of cobalt-60 per gram of aluminum. When buried, the thimble's exterior surfaces would also have been contaminated

with activated graphite products and potassium borate.

Site Code: 100-D-46 Classification: Accepted

Site Names: 100-D-46, Burial Ground 4A, 118-D-4A ReClassification: Interim Closed Out (3/1/2001)

Site Type: Burial Ground Start Date:
Site Status: Inactive End Date:

Site This site has been remediated and closed out as part of the excavation for the 116-D-1A and 116-

Description: D-1B Trenches. The site was a 19 by 59-meter (62 by 195-foot) construction burial ground.

Both of the referenced drawings refer to the site as Burial Ground No. 4A.

Waste Type: Construction Debris

Waste Potential contaminates include: Co-60, Ni-63

Description:

Site Code: 100-D-47 Classification: Accepted

Site Names: 100-D-47, Construction C.G. 558-Rod ReClassification:

Burial, Burial Ground 4E, 118-D-4E

Site Type: Burial Ground Start Date:
Site Status: Inactive End Date:

Site The site is a burial ground used to dispose of waste during project CG-558.

Description:

Waste Type: Equipment

Waste The site is described as a rod burial site. The type and quantity of rods disposed of at this site is

Description: not known. Potential contaminates include: Co-60, Ni-63

Site Code: 100-D-53 Classification: Accepted

Site Names: 100-D-53, 117-DR Filter Building, 117-DR ReClassification:

HEPA Filter Building

Site Type: Process Unit/Plant Start Date: 1960

Site Status: Inactive End Date:

Site Description:

The ventilation exhaust filter building housed blowers and particulate filters used to treat the ventilation exhausted from the 105-DR Reactor Building. Included in this site are the 117-DR Building, the intake ventilation duct from the 105-DR Reactor Building, and the exhaust ventilation duct to the 116-DR Reactor Exhaust Stack. The building and below-grade duct work are made of reinforced concrete 0.3 to 0.6 meters (1 to 2 feet) thick. Above grade ducts are constructed of 10 gauge black steel. The building is approximately 20.7 meters (68 feet) long, 11.9 meters (39 feet) wide, and 10.4 meters (34 feet) high with 2.4 meters (8 feet) above grade. A soil berm is built up around the building from grade level to the top of the structure.

The building is divided into two large filter cells with a smaller operating area between them. The filter cells each can hold six filter frames (two wide and three deep). The filter frames were designed to hold twenty-four filters that were 0.6 meters (2 feet) square by 0.3 meters (1 foot) thick. There are spaces between the frames to allow access for filter maintenance. The operating area between the two cells is divided into two levels. The upper level, called the access gallery has ten doors that lead from it. Four doors open into each of the filter cells and the other two doors provide access to the intake and exhaust ducts. The operating gallery is located below the access gallery. A sump is located at each end of the operating gallery to collect incidental drainage from above. A large open area extends the full length of the structure above the access gallery and the filter cells. It ranges in height between 2.5 and 2.4 meters (8.1 and 7.8 feet) due to the structure's sloping roof. The space provides access to the cement cover blocks that are positioned over each of the filter frames.

Waste Type: Equipment

Waste **Description:** The site contains radiologically contaminated surfaces and contamination from 105-DR Reactor ventilation exhaust. Hazardous residue from the Large Sodium Fire Facility is accounted for within that site (122-DR-1).

Site Code: 100-D-54 **Classification:** Accepted

100-D-54, Drywell Near Fire Facility **ReClassification: Site Names:**

Gravel Scrubber

French Drain **Site Type: Start Date: Site Status: End Date:** Inactive

The site is a 56-centimeter (28-inch) drywell. The unit is constructed of concrete pipe and has a Site steel cover. When opened during a field visit, the drywell was found to be approximately 1.5 **Description:**

meters (4.9 feet) deep with a 5-centimeter (2-inch) pipe entering it near the bottom on the east

side.

Site Code: 100-D-55 **Classification:** Rejected (5/31/2001)

Site Names: 100-D-55, Gravel Pit #21, Pit 21 **ReClassification:**

Site Type: Depression/Pit (nonspecific) **Start Date: Site Status:** Active **End Date:**

The site is a large excavation containing another waste site, 100-D-15, which is debris in the east Site **Description:**

end of the pit. The debris is marked with post and chain and labeled as a separate waste site. The remainder of the pit is available to use as clean fill material. There is no other waste material in

the pit. The soil is sandy.

Demolition and Inert Waste Waste Type:

Waste

There is an area of discarded debris located in the east end of this gravel pit. The debris is a separate waste site known as 100-D-15. In 1994, Kaiser Hanford removed sediments from the **Description:** 182-D basins and deposited them inside this gravel pit, partially over top of the previously discarded debris. The sediment was determined to be "clean dredge soil" as defined in Washington Administrative Code 173-304-100. The total content of the discarded debris is

unknown.

Site Code: 100-D-58 **Classification:** Accepted

Site Names: 100-D-58, 100-DR Area On-site Sewage **ReClassification:**

System for MO-980 & 4-Closet Restroom

Facility

Start Date: 1998 **Site Type:** Septic Tank

Site Status: Active **End Date:**

The septic tank portion of the site is surrounded by yellow steel posts and the drain field is Site **Description:** surrounded with light duty chain and steel fence posts. The drainfield area is covered with

tumbleweeds. The septic tank is a 5,678 liter (1,000 gallon), two compartment tank. The tank can be accessed through 0.765 meter (30 inch) diameter ribbed PVC risers that extend to grade and are covered by fiberglass lids that are bolted in place. The risers are centered over 0.609

meter (24 inch) diameter openings through the concrete lid.

Waste Type: Sanitary Sewage

Waste **Description:**

100-D-62 **Site Code: Classification:** Discovery

100-D-62, 183-DR Headhouse Septic Tank **Site Names: ReClassification:**

Site Type: Septic Tank **Start Date: Site Status:** Inactive **End Date:**

Site

Description:

Site Code: Classification: 100-D-64 Accepted

Site Names: 100-D-64, 119-DR, 119-DR Sample **ReClassification:**

Building, 105-DR Reactor Exhaust Stack

Sampling Building

Site Type: Laboratory **Start Date: Site Status: End Date:** Inactive

Site

Description:

116-D-8 **Site Code:** Classification: Accepted

Site Names: 116-D-8, 100-D Cask Storage Pad **ReClassification:**

Start Date: 1946 Site Type: Storage 1975 **Site Status:** Inactive **End Date:**

Site The site is a rectangular pad covered with gray grout. There are no radiological postings, but it

Description: had been posted with Cave-in Potential signs. The Cave-in potential signs were removed in

November 1999.

Waste Type: Chemicals

Waste This site contains trace amounts of radionuclides and decontamination chemicals.

Description:

118-D-1 **Classification: Site Code:** Accepted

ReClassification: Site Names: 118-D-1, 100-D Burial Ground No. 1

Site Type: Burial Ground Start Date: 1944 **Site Status:** Inactive **End Date:** 1967

This unit contains many trenches running north and south. Typically, the trenches are 90 meters Site **Description:**

(300 feet) long by 6 meter (20 feet) wide and 6 meters (20 feet) deep with a 6 meters (20 feet) of

space between them.

Waste Type: Equipment Waste Description:

The unit was used for the disposal of irradiated dummies, thimbles, rods, gun barrels, and other contaminated solid waste. Potential contaminates include: H-3, C-14, Co-60, Ni-63, Sr-90, Ag-

108m, Cs-137, Eu-152, Eu-154, cadmium, lead, mercury

Site Code: 118-D-2 Classification: Accepted

Site Names: 118-D-2, 100-D Burial Ground No. 2 ReClassification:

Site Type:Burial GroundStart Date:1949Site Status:InactiveEnd Date:1970

Site Description:

The unit contained many trenches running east to west and 5 pairs of disposal pits. The trenches are 20 meters (66 feet) wide at the surface, 6.1 meters (20 feet) wide at the bottom, and 6.1 meters (20 feet) deep. Each pair of pits was constructed by stacking railroad ties, creating two spaces with interior dimensions of approximately 1.8 by 1.8 meter (6 by 6 feet) that shared a common wall. The structures were built within an excavation 7.3 meters (24 feet) wide by 7.3 meters (24

feet) deep. All were covered with 1.8 meters (6 feet) of soil.

Waste Type: Equipment

Waste Description:

The unit was used for miscellaneous contaminated solid waste, irradiated dummies, splines, rods, thimbles, and gun barrels. After April 1966, 100-N Area solid wastes were also buried here. It was reported that there was a large fire in this burial ground sometime around 1960. The large volumes of water that were required to extinguish the fire could have potentially washed contaminants into the soil column beneath the burial ground.

Site Code: 118-D-3 Classification: Accepted

Site Names: 118-D-3, 100-D Burial Ground No. 3 ReClassification:

Site Type:Burial GroundStart Date:1956Site Status:InactiveEnd Date:1973

Site The site is a burial ground containing multiple trenches running north and south. Typically, trenches were 61 meters (200 feet) long by 6.1 meters (20 feet) wide at the bottom and 6.1 meters

(20 feet) deep. The spacing between trenches was not uniform.

Waste Type: Equipment

Waste Description:

The unit contains miscellaneous contaminated solid wastes and irradiated dummies, splines, rods, thimbles, and gun barrels. It was also used for disposal of 100-N solid wastes. Nearby there are two additional burial sites. The Minor Construction Burial Ground #2 was dug in 1953 to receive ball 3X wastes, rod guides, and miscellaneous wastes; and a small trench was dug in March 1954 to receive cooling water wastes from the #1 DR west effluent expansion box repairs. Potential contaminates include: H-3, C-14, Co-60, Ni-63, Sr-90, Ag-108m, Cs-137, Eu-

152, Eu-154, cadmium, lead, mercury

Site Code: 118-D-4 Classification: Accepted

Site Names: 118-D-4, Construction Burial Ground, **ReClassification:**

Burial Ground 4F, 118-D-4F

Site Type: Burial Ground Start Date: 1953

End Date: 1967 **Site Status:** Inactive

The site appears as a gravel and cobble field. Site

Description:

Description:

Waste Type: Equipment

Waste

This unit contains contaminated material generated during Project CG-558. The contaminated material consisted mainly of reactor components and hardware. Potential contaminates include:

ReClassification:

C-14, Co-60, Ni-63, cadmium, lead

Site Code: 118-D-5 Classification: Accepted

118-D-5, Ball 3X Burial Ground, Burial **Site Names:**

Ground 4G, 118-D-4G, Minor Construction

Burial Ground Number 5

Site Type: Burial Ground Start Date: 1954 **End Date:** 1954 **Site Status:** Inactive

Site The unit consists of two burial trenches located parallel to each other. Each trench is 12.2 meters

Description: (40 feet) long by 6.1 meters (20 feet) wide, however, the exact location is unknown.

Waste Type: Equipment

Waste This site contains the thimbles removed from the 105-DR Reactor during the Ball 3X work in

1954. Potential contaminates include: Co-60, Ni-63 **Description:**

Site Code: 128-D-1 **Classification:** Accepted

128-D-1, 100 D/DR Burning Pit **ReClassification: Site Names:**

Site Type: Burn Pit **Start Date:** 1944 **Site Status:** Inactive **End Date:** 1967

Site The site was used for the disposal of nonradioactive, combustible materials, such as paint waste,

Description: office waste, and chemical solvents.

Waste Type: Misc. Trash and Debris

The site was used for the disposal of nonradioactive, combustible materials, such as paint waste, Waste office waste, and chemical solvents. The exact location of this waste site is unknown, although **Description:**

evidence of burning and waste materials were found at the site. On September 29, 1951, contaminated materials were found in the burning pit (Radiation incident: Class 1 #180). All contaminated materials were removed to the radioactive burial ground for proper disposal.

Site Code: 1607-D1 **Classification:** Accepted

Site Names: 1607-D1, 1607-D1 Septic Tank and **ReClassification:**

Associated Drain Field, 124-D-1, 1607-D1

Sanitary Sewer System, 1607-D1 Septic

Tank

Septic Tank **Start Date:** 1944 **Site Type:**

Site Status: Inactive End Date: 1965

Site The site is a septic tank and associated drain field. The tank is 3.4 meters (11 feet) deep,

Description: constructed of reinforced concrete, and has a 125-person capacity (130 liters [35 gallons] per capita) with an average detention period of 24 hours. The walls and floor are 25 centimeters (10

inches) thick. The tile field is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a minimum of 2.4 meters (8 feet) per capita. The laterals are open jointed and

spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary waste from the 1701-D Badgehouse (security

Description: check point) and the 1709-D Patrol Change Room and Offices.

Site Code: 1607-D3 Classification: Accepted

Site Names: 1607-D3, 1607-D3 Septic Tank and ReClassification: Closed Out (2/23/2001)

Associated Drain Field, 1607-D3 Sanitary Sewer System, 1607-D3 Septic Tank

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:2000

Site The site is an inactive septic system associated with the 151-D Substation. A sign stating **Description:** "Abandoned Septic Tank per WAC 246-272-1850 DynCorp Environmental" is posted at the site.

The tank has been abandoned per WAC 246-272-18501 and as of August 2000 is

indistinguishable in a dirt and cobble field.

The reinforced concrete tank is 1.8 meters (6 feet) long, 0.9 meters (3 feet wide), and 3 meters (9 feet 10 inches) deep (inner dimensions). The tank had a design capacity of 1325 liters (350 gallons) based on a user capacity of 10 persons, a flow of 132 liters (35 gallons) of sewage per capita per day, and an average detention time of 1 day. The walls are 20 centimeters (8 inches) thick. The floor is 15 centimeters (6 inches) thick. The tile field was constructed of 10 centimeter (4 inch) vitrified or concrete pipe, or drain tile with a minimum of 2.4 meter (8 foot) per capita. The laterals are open jointed and spaced 2.4 meters (8 feet) apart. Prior to decommissioning, the septic tank was surrounded by light posts and chain.

Waste Type: Sanitary Sewage

Waste This unit received sanitary waste from the 151-D Electrical Distribution Substation. The flow

Description: rate to this unit was estimated at 3,970 Liters (1,050 gallons) per day.

Site Code: 116-DR-3 Classification: Accepted

Site Names: 116-DR-3, 105-DR Storage Basin Trench **ReClassification:**

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1955

Site The site appears as a vegetation-free, cobble and soil-covered field within a larger area bounded

Description: by permanent concrete markers posted with Underground Radioactive Material warning signs.

The trench is approximately 15 meters (50 feet) long.

Waste Type: Sludge

Waste The site received contaminated sludge and water removed from 105-DR Fuel Storage Basin.

Description:

Site Code: 116-DR-4 Classification: Accepted

Site Names: 116-DR-4, 105-DR Pluto Crib ReClassification: Interim Closed Out (10/23/2000

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1956

Site The crib has been remediated and closed out. It is no longer marked or posted.

Description:

Waste Type: Process Effluent

Waste The site received liquid wastes from isolated tubes containing ruptured fuel elements in the 105-Description: DR Fuel Storage Basin. The site may have also received excess "ink" (liquid boron solution)

used in the 3X safety system.

Site Code: 116-DR-6 Classification: Accepted

Site Names: 116-DR-6, 1608-DR Liquid Disposal ReClassification: Interim Closed Out (10/23/2000

Trench, Wash Pad Liquid Waste Site 3C

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1965

Site The site has been remediated and was closed out on October 23, 2000. It is no longer marked or

Description: posted.

Description:

Waste Type: Process Effluent

Waste The site received diverted coolant during the Ball 3X upgrade. It also received diverted water

when maintenance was necessary on the effluent system during a reactor shutdown. It is

reported that the volume of liquids disposed of at this unit would cause it to overflow, and a

solvent odor was present at the site on very hot days.

Site Code: 116-DR-7 Classification: Accepted

Site Names: 116-DR-7, 105-DR Inkwell Crib ReClassification: Interim Closed Out (9/26/2000)

Site Type:CribStart Date:1953Site Status:InactiveEnd Date:1953

Site The site was remediated in December 1999 by removing the structure and associated

Description: contaminated soil. As of September 2000, the excavation was still open, but is to be backfilled in

the near future to a reference grade of elevation 142.0 meters (466 feet).

Waste Type: Process Effluent

Waste Liquid potassium borate solution was drained from the 3X System prior to the Ball 3X System

Description: upgrade.

Site Code: 116-DR-8 Classification: Accepted

Site Names: 116-DR-8, 117-DR Crib, 117-DR Seal Pit

Crib

Crib **Start Date:** 1960 **Site Type: Site Status:** Inactive End Date: 1964

Site The structure is filled with gravel and covered to grade with clean soil. A large steel vent

Description: identifies the site.

A 10 centimeter (4 inch) asbestos cement pipeline runs to this site from 100-D-53, the 117-DR

ReClassification:

HEPA Filter Building.

Waste Type: Process Effluent

The site received drainage from the 117-DR Building seal pits. Waste

Description:

Site Code: 116-DR-10 **Classification:** Accepted

Site Names: 116-DR-10, 105-DR Fuel Storage Basin **ReClassification:**

Cleanout Percolation, 105-DR Fuel Storage

Discharge Pond, 105-DR Pond

Site Type: Pond **Start Date:** 1984 **End Date:** 1984 **Site Status:** Inactive

The unit is an open excavated pit located in a natural depression. The excavation has been Site backfilled and graded to match the natural terrain. The original natural depression remains. **Description:**

Waste Type: Water

Waste **Description:** The unit received processed water from the 105-DR Fuel Storage Basin. During the cleanout of this basin, the radiologically contaminated shielding water was processed through a system using ion exchange columns. Before discharging the water to the unit, composite samples were taken to ensure that radionuclide concentrations were below release criteria in Table II of DOE Order 5480.1. Although the water was cleaned to applicable release limits, minute quantities (below release limits) of radionuclides remaining in the water accumulated in the soil at some low points in the floor. No known hazardous substances were present in the water; however, chemical analysis was not a standard practice during that period, and there is no evidence that one was performed. It should be noted that water removed from the 1608-DR is believed to be comparable to the storage basin water, and EP-TOX testing results for the 1608-DR water were negative.

118-DR-1 **Classification: Site Code:** Accepted

Site Names: 118-DR-1, 105-DR Gas Loop Burial **ReClassification:**

Ground

Burial Ground Site Type: Start Date: 1963 1964 **Site Status:** Inactive **End Date:**

Site The unit contains a gunnite-lined trench running north and south that was water-filled and used for the sectioning and examinations performed on test assemblies removed from the 105-DR Reactor. **Description:**

Waste Type: Equipment Waste Description:

This unit contains irradiated metal assemblies from the 105-DR Gas Loop.

Site Code:

118-DR-2 Classification: Accepted

Site Names: 118-DR-2, 105-DR Reactor Building, 105-

ReClassification:

ReClassification:

DR

Site Type: Reactor Start Date: 1950
Site Status: Inactive End Date: 1964

Site Ti

Description:

The unit consists of: 1) a reactor block, which includes the graphite moderator stack, biological and thermal shields, pressure tubes, and the safety and control systems; 2) the irradiated fuel

storage basin; and 3) contaminated portions of the reactor building.

Waste Type: Equipment

Waste This unit contains radiation levels estimated at 13,500 curies, 85,300 kilograms (94 tons) of **Description:** lead, 2.8 cubic meters (100 cubic feet) of asbestos, and 230 kilograms (500 pounds) of cadmium.

Site Code: 122-DR-1 Classification: Accepted

Site Names: 122-DR-1, 105-DR Sodium Fire Facility,

Laboratory

105-DR Large Sodium Fire Facility

Start Date: 1972

Site Status: Inactive End Date: 1986

Site Description:

Site Type:

The 105-DR Large Sodium Fire Facility (LSFF) was established to study fire fighting and safety aspects associated with large sodium or other metal alkali fires in the Liquid Metal Fast Breeder Reactor (LMFBR) facilities. The LSFF occupies the former supply fan room of the 105-DR Reactor Facility and covers approximately 1,400 square meters (15,000 square feet) of floor space. The facility closure plan divides the facility into seven areas for sampling and closure

purposes. The seven areas are described as subsites.

Waste Type: Chemicals

Waste Wastes consisted of sodium, lithium, sodium-potassium alloy, lithium-lead alloy, and their

Description: oxidation products.

SubSites:

SubSite Code: 122-DR-1:1

SubSite Name: 122-DR-1:1, 122-DR-1 Area 1, Testing, Storage, and Office Area, 100-D-51, 105-DR 90-Day

Waste Accumulation Area

Classification: Accepted

ReClassification: Closed Out

Description: Area 1 consists of the exhaust fan room, small fire room, large fire room, sodium handling

room, and an office area.

The exhaust fan room is 6.2 meters (20.5) feet wide, 8.2 meters (27 feet) long, and 6.4 meters (21 feet) high. In this room, waste alkali metals from various sources, including residuals from tests, failed equipment, and drum heels, were reacted at atmospheric pressure. The burn

pans and equipment were cleaned periodically using water and the rinsate was collected in a sump. The wash water was pumped from the sump to a seal pit where it was neutralized prior to discharge.

The small fire room is 6.2 meters (20.5 feet) wide, 8.2 meters (27 feet) long, and 6.4 meters (21 feet) high. It contains one steel cylindrical pressure vessel with a dished top. The vessel has a volume of approximately 14 cubic meters (500 cubic feet). When in use, the vessel could be purged with nitrogen or argon to maintain a controlled atmosphere. This vessel was the only one used to burn lithium-lead alloy waste.

The large fire room is 6.2 meters (20.5 feet) wide, 8.2 meters (27 feet) long, and 6.4 meters (21 feet) high. It contains the Large Test Cell which is a steel cubicle 110 cubic meters (3,700 cubic feet) in volume. The cell could be purged with nitrogen or argon to maintain a controlled atmosphere.

The sodium handling room contained drum melters and a 3,400 liter (900 gallon) type-304 stainless-steel sodium batch tank which provided sodium to the Large Test Cell. The tank was resupplied from sodium drums that were heated to liquefy the sodium, which was then discharged into the tank with inert gas.

The office area provided space for office work and storage of nondangerous materials.

During cleanup activities equipment was removed from the rooms, decontaminated and stockpiled for either recycling or reuse. The interiors of the Large Test Cell and the pressure vessel were decontaminated with a high pressure water blast to remove lead and carbonate contamination. The rooms were washed down using a pressure washer and a mildly acidic solution to remove visible residue. All penetrations into the reactor exhaust tunnels were sealed to isolate the area and prevent recontamination.

A 90-day waste accumulation area was set up at the north end of the office area for use during clean up activities. The accumulation area was enclosed within a wire cage. When the waste was removed, the unit was closed. This unit had been identified as a separate Waste Information Data System (WIDS) site (100-D-51).

The area was clean closed.

SubSite Code: 122-DR-1:2

SubSite Name: 122-DR-1:2, 122-DR-1 Area 2, Exhaust Tunnels

Classification: Accepted

ReClassification:

Description: Area 2 consists of the upper and lower exhaust tunnel, the blower that moved Large Sodium

Fire Facility (LSFF) exhaust from the lower to the upper tunnel, the exterior underground tunnel to the 117-DR HEPA Filter Building, and the ducts to the submerged gravel scrubber. Steel barricades at the north end of the tunnels block air flow to and from the reactor. The tunnel had low, but measurable radioactivity when sampled in 1987 (see DOE/RL-90-25, Rev

2, Appendix A for sampling information). This area will be remediated during

decommissioning of the 105-DR Reactor Building and associated systems. This area is part of the 105-DR Reactor Building and is also included in its Waste Information Data System

(WIDS) site (118-DR-2).

SubSite Code: 122-DR-1:3

SubSite Name: 122-DR-1:3, 122-DR-1 Area 3, Gravel Scrubber

Classification: Accepted

ReClassification: Closed Out

Description: Area 3 consists of a submerged gravel scrubber and ducts that were installed in 1982 as part

of a filter development program. Installation of the gravel scrubber allowed the offgas from tests or burning to bypass the 117-DR HEPA Filter Building. The scrubber water was confirmed to be within pH tolerances (2.0 to 12.5) and discharged to the 116-DR-8 Crib. Two gravel samples numbered BOG9F6 and BOG9F7 were taken from the gravel scrubber. Based on evaluation of the sample data, the gravel did not designate as a Dangerous Waste (see WHC-SD-EN-EV-034, Rev. 1 for sample results). The gravel that had been removed from the unit was made available for reuse. The associated ductwork was removed. The area

was clean closed.

SubSite Code: 122-DR-1:4

SubSite Name: 122-DR-1:4, 122-DR-1 Area 4, 117-DR HEPA Filter Building

Classification: Accepted

ReClassification:

Description: Area 4 consists of the 117-DR HEPA Filter Building and the downstream tunnel to the reactor

stack. The filter building houses the exhaust air filters. The building is about 18 meters (59 feet) long, 12 meters (39 feet) wide, and 11 meters (35 feet) high. The Filter Building is connected by underground concrete ductwork to the 116-DR exhaust stack. The filter building contains the HEPA filters, which are installed in four filter frames (24 filters per frame). In 1972, the original HEPA filters from the 105-DR Reactor were replaced before Large Sodium Fire Facility (LSFF) operations began. However, remnant radioactivity from the exhaust tunnels or filter holders has probably been picked up by the new filters. This area will be remediated during decommissioning of the 105-DR Reactor Building and associated systems. The 117-DR Filter Building is also a separate Waste Information Data System

(WIDS) site (100-D-53).

SubSite Code: 122-DR-1:5

SubSite Name: 122-DR-1:5, 122-DR-1 Area 5, 116DR Reactor Exhaust Stack

Classification: Accepted

ReClassification:

Description: Area 5 consists of the reactor exhaust stack. Over the life of the Large Sodium Fire Facility

(LSFF) there were two routes for exhaust to take before entering the reactor exhaust stack. The first route was through the HEPA filters which have a 99.95 percent efficiency rating. The second route was through the submerged gravel scrubber which had an efficiency rating of approximately 99 percent. It is expected that there are no measurable deposits of residue from LSFF operation within the stack. This area will be remediated during decommissioning of the 105-DR Reactor Building and associated systems. The 116-DR Reactor Exhaust Stack

is also a separate Waste Information Data System (WIDS) site (132-DR-2).

SubSite Code: 122-DR-1:6

SubSite Name: 122-DR-1:6, 122-DR-1 Area 6, 116-DR-8 Crib

Classification: Accepted

ReClassification: Closed Out

Description: Area 6 consists of the 116-DR-8 Crib. The crib was originally used from 1960 to 1964 to

percolate low-level waste drainage from the 117-DR Building seal pits. When used for the

Large Sodium Fire Facility (LSFF), the 116-DR-8 Crib received only water reported not to have been corrosive (the pH level was less than 12.5). This area is considered closed for the purposes of Washington Administrative Code (WAC) 173-303-610. Any contamination associated with Area 6 will be remediated in accordance with the 100-HR-3 RFI/CMS process.

SubSite Code: 122-DR-1:7

SubSite Name: 122-DR-1:7, 122-DR-1 Area 7, Outdoor Storage Area

Classification: Accepted

ReClassification: Closed Out

Description: Area 7 consists of the area to the north and west of the 117-DR HEPA filter building. The

burn pans used in the alkali metal fires were sometimes stored in this area. Six soil samples, three random and three authoritative, were collected for this site. The samples were number BOG979 through BOG984. All samples were well below the Hanford Site background 95% thresholds for both lithium and sodium in soil (see WHC-SD-EN-TI-307 for sample results).

The area was clean closed.

Site Code: 126-DR-1 Classification: Accepted

Site Names: 126-DR-1, 190-DR Clearwell Tank Pit **ReClassification:**

Site Type: Dumping Area Start Date: 1975

Site Status: Active End Date:

Site The unit is an excavated area between the 183-DR and 190-DR that contained four 1.42E+07

Description: liter (3.75E+06-gallon) steel water storage tanks. The four tanks were removed. Approximately

25% of the bottom surface area contains a layer of waste 1.5 to 3 meter (5 to 10 feet) deep that is covered with pit run backfill and located in the northwest sector of the pit. The southern sector is

posted as an asbestos area.

Waste Type: Misc. Trash and Debris

Waste The unit contains demolition and inert waste from demolished facilities, including rubble from **Description:** released portions of the 115-D/DR, and some rubble from 183-DR. In 1989, small amounts of

friable asbestos were found scattered throughout the southern sector. The asbestos is believed to be the result of salvage operations during the 1970's. This site may contain chromates in both the soil and underground piping as a result of its association with water treatment. Because of this potential, it is closed to waste disposal. There is potential for chemical and radioactive contamination similar to that found in the 126-D-2 Burial Ground as uncontrolled dumping reportedly occurred at the site, but it is thought to be in much smaller volumes. Potential contaminates include: Chromate, lead, undetermined organic and inorganic chemicals

Site Code: 132-DR-1 Classification: Accepted

Site Names: 132-DR-1, 1608-DR Waste Water Pumping ReClassification:

Station, 1608-DR Effluent Pumping Station

Site Type:Pump StationStart Date:1950Site Status:InactiveEnd Date:1964

Site The unit consisted of: 1) an above ground section constructed with concrete block walls, a reinforced concrete floor, and a reinforced concrete roof with a composition surface; and 2) a

below grade section constructed of reinforced concrete. The facility contained an operating level, which consisted of pumping equipment, and an accumulation inlet chamber, which fed three discharge sump chambers. The accumulation chamber was located in the northern section of the facility.

Waste Type: Water

Waste Description:

This site received water from reactor building drains containing trace amounts of low-level radionuclides and decontamination chemicals. Radionuclides were primarily miscellaneous fission and activation products. The decontamination chemicals consisted of sodium fluoride, oxalic acid, and citric acid. Water was pumped from the reactor collection pits into the reactor effluent lines near the reactor building and became part of the 107-DR effluent that was discharged to the Columbia River.

Site Code: 132-DR-2 Classification: Accepted

Site Names: 132-DR-2, 116-DR Reactor Exhaust Stack **ReClassification:**

Site Type:StackStart Date:1950Site Status:InactiveEnd Date:1986

Site Description:

The stack has been demolished. The unit was a monolithic, reinforced concrete structure with a maximum wall thickness of 0.46 meter (1.5 feet) at the base. It rested on a double octagon-shaped base that extended 5.3 meters (17.5 feet) below grade. An opening at the base provided access to its interior portion. This opening was fitted with a steel door.

Waste Type: Chemicals

Waste Description:

Description:

Until 1964 the unit discharged exhaust air from the 105-DR Building. Since 1972, the unit was used to support operations relating to the 105-DR Large Sodium Fire Facility (122-DR-1). The interior of the unit contains an unknown quantity of low-level radioactive materials.

Site Code: 600-30 Classification: Accepted

Site Names: 600-30, 100-DR Construction Lay-down **ReClassification:**

Area

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The unit is a 4 hectare (10 acre) site covered with scattered construction related debris. Based on physical and photograph evidence, it appears to have been a lay-down yard during construction of

105-DR. Vegetation at the site includes grasses and rabbit brush. There are numerous areas that show signs of plant stress ranging from reduced to no vegetation. There is also evidence of

burning throughout the unit.

Waste Type: Construction Debris

Waste Waste consists of broken sheet asbestos, buckets of tar, steel, galvanized pipe, rebar, angle iron,

deteriorated keg of nails, burned and crushed drums, steel plate, chain, wire rope, bolts, metal hinges, shovels, gas and oil cans, welding rod cans, evidence of concrete blocks, metal tubing,

and broken shipping boxes.

100-FR-1

Site Code: 141-C Classification: Accepted

Site Names: 141-C, 141-C Animal Barn, Large Animal ReClassification:

Barn & Biology Laboratory, Hog Barn

Site Type:LaboratoryStart Date:1945Site Status:InactiveEnd Date:1976

Site Description:

A portion of the radiobiological experiments carried out at 100-F Experimental Animal Farm Area involved the use of large animals. The 141-C Building provided facilities for the long-term housing and care of these animals. The building was a single L-shaped structure with each wing measuring 35.4 meters (116 feet) by 6.1 meters (20 feet) wide by 2.4 meters (8 feet) high. It was a Butler-type building of all-steel construction and was set on a concrete pad. The animal stalls were of steel construction and each was equipped with feeding and watering facilities. A common drainage trench served all of the stalls. The 141-C Building included a dry well at its southwest corner that drained a loading dock at the facility's southwest end. It is likely that this dry well received only stormwater runoff, but it may have been contaminated by washwater containing radioactive animal waste.

The building has been demolished. A site inspection on December 29, 1993 revealed little evidence of the 141-C Building. The site is located on a flat area vegetated with rabbitbrush and cheatgrass in rocky soil. A steel post remains just east of where the building was located.

A 15-centimeter (6-inch) gate valve is located just east of 141-C Building. This valve controlled the discharge of contaminated liquid waste from the 141-C Building. The valve is connected to 37 meters (120 feet) of potentially contaminated 20-centimeter (8-inch) steel pipeline. This pipeline extends from the valve to the decommissioned waste lift station and was left in place. The valve and the pipe end have been capped and a temporary steel post marks the location of the valve. A maximum measurement of 6,000 counts per minute was detected inside of the open valve.

Waste Type: Water

Waste Wash down water may have included the radionuclides used in the animal studies (iodine-131,

Description: strontium-90, cesium-137, and plutonium-239).

Site Code: 100-F-4 Classification: Accepted

Site Names: 100-F-4, 108-F Building 12-inch French ReClassification: Interim Closed Out (7/25/2002)

Drain

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The french drain was constructed of 30-centimeter (12-inch) vitrified clay pipe, or similar material and was filled with gravel. A 1.3-centimeter (0.5-inch) steel pipe entered the drain from the 108 F Building. The drain was visible on Hanford photograph 106660, 90 CN

the 108-F Building. The drain was visible on Hanford photograph 106669-90-CN.

Documentation suggests that the drain was likely removed as part of the layback zone of the 108-

F Building excavation.

Waste Type: Water

Waste Description:

The types and quantities of waste the unit received are unknown.

Description.

Site Code: 100-F-5

Classification: Accepted

Site Names: 100

100-F-5, 1717-F Building Drywell

ReClassification: Rejected (7/29/1997)

Site Type: French Drain

Start Date:

Site Status: Inactive

End Date:

Site Description:

The site is a 1.2 meters (48 inches) diameter french drain (drywell). The drywell was constructed per Hanford Standard AC-5-3 and was surrounded by steel post and chain barrier. The purpose of the site was to receive boiler steam condensate from blowdown valves. A 10 centimeter (4

inches) pipeline connected the boilers (2) of the 1717-F Building to the drywell.

Waste Type: Steam Condensate

Waste Description:

The unit received steam condensate from automatic blowdown valves connected to the boilers. The steam generation system for 1717-F was a once through system. The condensate would have received some residual salt (sodium chloride) from water softeners. Backflush from the water softeners went to the sanitary sewer system. Review of the drawings shows no indication of any additional chemical treatment during water softening. Steam condensate was not recycled to the boiler system. Drawing H-1-14566, Steam Generating Equipment Installation Piping Diagrams, shows the steam generation equipment including, the boilers, automatic blow down

valves, piping to the drywell, and the drywell.

Site Code: 100-F-6

Classification: Rejected (7/29/1997)

Site Names:

100-F-6, 1716 FA Fuel Tank and Pump

ReClassification:

Site Type:

Storage Tank

Start Date:

Site Status:

Site

Inactive

End Date: 1945

The site is the 1716-FA Automotive Repair Shop gas tanks and gas pumps. Hanford Drawing M-

Description:

2938 shows the location of the shop and gas tanks.

During the April 1999 visit, a survey grade GPS was used to locate the site based on its mapped coordinates. The surrounding area was covered with cobbles and rocks with sparse vegetation, primarily rabbitbrush and grasses. Some debris was visible, including metal, concrete chunks and fragments of automobile headlights or taillights. An approximately 3.7 meter (12 foot) tall pile of soil and rock was visible to the south and appeared to be old borrow material.

Waste Type: Oil

Waste

Description:

Site Code: 100-F-7

Classification: Accepted

Site Names:

100-F-7, Underground Fuel Tank - 1705-F

ReClassification:

Building

Site Type: Storage Tank

Start Date: 1948

Site Status: Inactive

End Date:

Site Description:

The site is an underground fuel tank that supplied the oil furnace in the 1705-F Building Heater Room. The building has been decommissioned and demolished. Debris and asphalt are strewn about the area. The tank's presence could not be confirmed with a metal detector due to multiple underground magnetic anomalies in the area. During the April 1999 visit, a survey grade GPS was used to locate the site based on its mapped coordinates. No evidence of the site could be found at this point.

Site Code: 100-F-8 Classification: Accepted

Site Names: 100-F-8, French Drains Near 105-F Gate ReClassification: Rejected (7/29/1997)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The two french drains are constructed of 91 centimeter (36 inch) concrete pipe of unknown length

Description: buried to a depth which places their upper surfaces a few inches above grade.

Waste Type: Water

Waste Description:

Site Code: 100-F-9 Classification: Accepted

Site Names: 100-F-9, French Drain at East End of 105-F **ReClassification:**

Storage Room (Northeast Corner)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The 100-F-9 French Drain is a 91-centimeter (36-inch) concrete pipe buried to an unknown

Description: depth. The upper surface of is a few inches above grade and is cobble-filled. The unit was fed by

one or more 2.5-centimeter (1-inch) steel pipes coming from the 105-F Building. Only one pipe

is visible.

Waste Type: Water

Waste Description:

Site Code: 100-F-10 Classification: Accepted

Site Names: 100-F-10, French Drain at East End of 105- ReClassification:

F Storage Room (Southeast Corner)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The 100-F-10 French Drain is a 91-centimeter (36-inch) concrete pipe buried to an unknown

Description: depth. The upper surface of is a few inches above grade and is cobble-filled. The unit was fed by

one or more 2.5-centimeter (1-inch) steel pipes coming from the 105-F Building. Only one pipe

is visible. A 1.9-centimeter (0.75-inch) pipe also enters the top of the drain.

Waste Type: Water

Waste Description:

Site Code: 100-F-11 Classification: Accepted

Site Names: 100-F-11, 108-F Building 18 inch French ReClassification: Interim Closed Out (7/25/2002)

Drain

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The french drain was constructed of 46-centimeter (18-inch) concrete pipe of unknown length. The unit had no cover and was filled with gravel. A 2.5-centimeter (1-inch) steel pipeline entered the drain from the 108-F Building. The drain was visible on Hanford photograph 106669-90-CN.

Documentation suggests that the french drain was likely removed with the layback zone of the

108-F Building.

Waste Type: Water

Waste Description:

Site Code: 100-F-12 Classification: Accepted

Site Names: 100-F-12, 36 inch French Drain at 105-F **ReClassification:**

Building

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The unit is constructed of 0.9-meter (36-inch) concrete pipe of unknown length. It stands a few centimeters above grade and has a steel lid (manhole cover). It is marked "Danger - Confined"

centimeters above grade and has a steel lid (manhole cover). It is marked "Danger - Confined Space". Four 19-millimeter (0.75-inch) and one 25-millimeter (1-inch) steel pipes enter the drain from the building. The unit is adjacent to a steel door marked "Electrical Equipment Room No.

1".

Waste Type: Water

Waste Description:

Site Code: 100-F-16 Classification: Accepted

Site Names: 100-F-16, 108-F Building 30-inch French ReClassification: Interim Closed Out (7/25/2002)

Drain, Undocumented

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The french drain was constructed of steel pipe, filled with gravel, and covered with a steel lid. The drain extended 18 centimeters (7 inches) above grade and was 76 centimeters (30 inches) in diameter. Documentation suggests that the drain was likely removed with the layback zone of the

108-F Building excavation.

Waste Type: Water

Waste The dates of operation and type and quantity of waste are unknown.

Description:

Site Code: 100-F-17 Classification: Rejected (7/29/1997)

Site Names: 100-F-17, 108-F Chemical Pump House, **ReClassification:**

Chemical Storage Tanks at 108-F, Chemicals Used at 108-F Building

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The site is a four story steel framed building with concrete block walls, concrete foundation and Description: floors, and a concrete tile roof with a tar and gravel surface. The entire building is in poor

condition. The chemical storage tanks that were originally located on the west side of the building have been removed. A loading dock extends from the southend of the east wall. A gas dock is attached to the south end of the building. Abandoned equipment and debris is scattered

around the southwest corner of the building.

Waste Type: Asbestos (friable)

Waste

Description:

Site Code: 100-F-18 Classification: Accepted

Site Names: 100-F-18, 105-F Condensate Drain Field, ReClassification:

Underground Tank at 105-F Building,

Undocumented

Site Type: Drain/Tile Field Start Date:
Site Status: Inactive End Date:

Site The site is a drainfield that received condensate from the 105-F Fan House. The site is not visible

at the surface, but was identifiable by a 20-centimeter (8-inch) diameter, 91-centimeter (36-inch) long steel pipe that is welded to the what appeared to be the top of a 91-centimeter (36-inch) diameter steel tank. The upper surface of the "tank" was above grade. Liquid was observed through the steel pipe when the site was investigated for the 100-F Technical Baseline Report.

Waste Type: Water

Waste

Description:

Description:

Site Code: 100-F-19 Classification: Accepted

Site Names: 100-F-19, 100-F Reactor Cooling Water **ReClassification:**

Effluent Underground Pipelines,

Contaminated Underground Lines, Effluent Water System, 1904-F Process Sewer; 100-

F-19:1, 100-F-19:2, 100-F-19:3

Hanford Site Waste Management Units Report January 2004

Site Type:Radioactive Process SewerStart Date:1945Site Status:InactiveEnd Date:1965

Site Description:

This site contained the 100-F Reactor cooling water effluent lines which have been divided into a small pipeline or trench and three subsites. The three subsites have been remediated and Interim Closed Out. Only the 116-F-2 trench section remains to be remediated. See cleanup activities field and each subsite for documentation of the remediation and closure.

Subsite 19:1 contained a line that was constructed of steel (152 centimeters [60 inches] in diameter, 235 meters [770 feet] long) and concrete (182 centimeters [72 inches] in diameter, 280 meters [920 feet] long) from the basin to the 1904-F Outfall Structure.

Subsite 19:2 consisted of effluent lines that transported 105-F Reactor cooling water from the reactor core to the 107-F Retention Basin (three lines - one measuring 106-centimeters [42-inches] in diameter and 635 meters [2,080 feet] long, a second measuring 152 centimeters [60 inches] in diameter and 283 meters [930 feet] long and the third measuring 105 centimeters [41 inches] in diameter and 238 meters [781 feet] long). The large effluent lines running between the 105-F Reactor Building and the 107-F Retention Basin were underground for the western section of the lines and above ground for the remainder. The above ground portions of each line have been removed, cut into sections, and placed in the retention basin where they are currently covered with a layer of soil.

Subsite 19:3 consisted of the effluent line that ran from the 105-F Reactor and the 182-F and 183-F Buildings to the 116-F-1 Lewis Canal. It also included all associated expansion and valve boxes, but excluded the retention basin, outfall structure, and those effluent lines that were within the confines of the 105-F Reactor Building. Other excluded lines were all the clean water pipelines that were upstream of the reactor building, all underground lines that were unique to the Experimental Animal Farm, and the smaller reactor effluent lines on the southwest side of the reactor.

The underground process sewers show little evidence of their location at the surface. Effluent pipe ends are exposed on the east side of the 100-F Area entrance road.

Waste Type: Process Effluent

Waste Description:

The waste was radioactively contaminated steel piping, concrete and soil. Reactor cooling water became radioactively contaminated as it passed through the reactor core. Activation products created in the water included calcium-41, chromium-51, and zinc-65. Activation products from the reactor core that were picked up and transported by the cooling water included tritium, carbon-14, cobalt-60, nickel-63, and europium-152/154/155. Fuel element fission products such as strontium-90, and cesium-137, as well as transuranics such as plutonium-239/240 were introduced into cooling water due to fuel cladding failures. Concentrations of radionuclides in cooling water during normal reactor operations were approximately 0.2 microcuries/liter. Concentrations of radionuclides have built up in rust flakes and scale on the inner surfaces of the pipelines and in sludge in the diversion and junction boxes. Average beta-gamma concentrations for the effluent line scale and junction/diversion boxes are 83,000 and 120,000 picocuries/liter, respectively. Average plutonium-239/240 concentrations are 66 picocuries/gram for the effluent line scale and 720 picocuries/gram for the sludge at the bottom of the diversion and junction boxes. Direct readings of the bottom of the effluent lines averaged approximately 40,000 counts/minute with a Geiger-Mueller probe. Additional chemicals were added to the effluent for purposes of water treatment. These included aluminum sulfate (alum), with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter.

SubSites:

SubSite Code: 100-F-19:1

SubSite Name: 100-F-19:1,100-F Reactor Cooling Water Effluent Underground Pipelines (North Group)

Classification: Accepted

ReClassification: Interim Closed Out

Description: The 100-F-19:1 North Pipelines subsite included piping that ran north-northwest from the

north side of the 116-F-14 Retention Basin to the 116-F-8 Outfall Structure and also included a second underground effluent pipeline that extended northwest from the 116-F-14 Retention

Basin to a junction box and to the 116-F-16 Outfall Structure.

The pipelines in this area have been removed including miscellaneous co-located pipelines that were within the excavation boundary. The 100-F-19:1 North Pipelines, 100-F-19:3 West Pipelines, 100-F-34 Biology Facility French Drain, and the 116-F-12 French Drain were remediated as a group in CVP-2001-00002. These sites meet the cleanup standards specified in the Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

Remedial actions were performed so as to allow rural-residential use of shallow zone soils (i.e., surface to 4.6 meters [15 feet] deep) and to protect groundwater and the Columbia River. The basis for reclassification is described in detail in the Cleanup Verification Package for the 100-F-19:1 North Pipelines, 100-F-19:3 West Pipelines, 100-F-34 Biology Facility French Drain, and 116-F-12 French Drain (CVP-2001-00002), Bechtel Hanford, Inc., Richland, Washington.

The cleanup verification package does not demonstrate the acceptability of unrestricted access to deep zone soils (i.e., below 4.6 m [15 ft]); therefore, institutional controls to prevent uncontrolled drilling or excavation into deep zone soils are required.

SubSite Code: 100-F-19:2

SubSite Name: 100-F-19:2, 100-F Reactor Cooling Water Effluent Underground Pipelines (South Group)

Classification: Accepted

ReClassification: Interim Closed Out

Description: This group of effluent lines exited the reactor building, extending to the east, and to the north

where they discharged to the 107-F Retention Basin. A portion of these pipelines were above ground before emptying into the retention basin. Another section of pipe in this subsite ran

from the north side of the reactor and emptied into Lewis Canal.

The 100-F-19:2 Reactor Cooling Water Effluent Pipeline and co-located sites, (116-F-11 Cushion Corridor French Drain, UPR-100-F-1 Sewer Line Leak, and the 100-F-29 Experimental Animal Farm Pipelines), have been remediated as a group in CVP-2001-00003. These sites were remediated to meet the cleanup standards specified in the Amendment to the Interim Action Record of Decision for the 100-BC-1, 100 DR-1, and 100 HR-1 Operable Units and the Interim Action Record of Decision for the 100-BC-1, 100 BC-2, 100 DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-HR-1, 100-HR-2, 100-KR-1, 100-KR-2, 100-IU-2, 100-IU-6, and 200-CW-3 Operable Units, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

Remedial actions were performed so as to allow rural-residential use of shallow zone soils (i.e., surface to 4.6 meters [15 feet] deep) and to protect groundwater and the Columbia River. The basis for reclassification was described in detail in the Cleanup Verification

Package 2001-00003, Bechtel Hanford, Inc., Richland, Washington.

The cleanup verification package does not demonstrate the acceptability of unrestricted access to deep zone soils (i.e., below 4.6 meters [15 feet]); therefore, institutional controls to prevent uncontrolled drilling or excavation into deep zone soils are required.

SubSite Code: 100-F-19:3

SubSite Name: 100-F-19:3, 100-F Reactor Cooling Water Effluent Underground Pipelines (West Group)

Classification: Accepted

ReClassification: Interim Closed Out

Description: The 100-F-19:3 West Pipelines subsite included sections of effluent pipelines located north of the reactor running west from the 182-F Reservoir and the 126-F-12 (183-F) Clearwell to the

116-F-1 Lewis Canal. This subsite also included piping running in a north-south direction

between the 182-F Reservoir and the 126-F-12 (183-F) Clearwell.

The 100-F-19:3 West Pipelines and 100-F-19:1 North Pipeline, were remediated with colocated sites; 100-F-34 Biology Facility French Drain and the 116-F-12 French Drain. The sites meet the cleanup standards specified in the Amendment to the Interim Action Record of Decision for the 100-BC-1, 100-DR-1, and 100-HR-1 Operable Units, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

Remedial actions were performed so as to allow rural-residential use of shallow zone soils (i.e., surface to 4.6 meters [15 feet] deep) and to protect groundwater and the Columbia River. The basis for reclassification is described in detail in the Cleanup Verification Package for the 100-F-19:1 North Pipelines, 100-F-19:3 West Pipelines, 100-F-34 Biology Facility French Drain, and 116-F-12 French Drain (CVP-2001-00002), Bechtel Hanford, Inc., Richland, Washington.

The cleanup verification package does not demonstrate the acceptability of unrestricted access to deep zone soils (i.e., below 4.6 m [15 ft]); therefore, institutional controls to prevent uncontrolled drilling or excavation into deep zone soils are required.

Site Code: 100-F-21 Classification: Rejected (7/29/1997)

Site Names: 100-F-21, Grounds Surrounding **ReClassification:**

Deactivated Areas, Exclusion Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The grounds within the 100-F exclusion area that are not part of other waste sites.

Description:

Site Code: 100-F-23 Classification: Accepted

Site Names: 100-F-23, 141-C Drywell ReClassification: Interim Closed Out (8/14/2003)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site was a French drain (drywell).

Waste Type: Animal Waste

Waste

Description:

Site Code: 100-F-24 Classification: Accepted

Site Names: 100-F-24, 145-F Drywell ReClassification: Interim Closed Out (8/12/2003)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

Waste Type: Animal Waste

Waste

Description:

Site Code: 100-F-25 Classification: Accepted

Site Names: 100-F-25, 146-FR Drywells ReClassification: Interim Closed Out (8/14/2003)

Site Type:French DrainStart Date:1956Site Status:InactiveEnd Date:1975

Site The site has been remediated and closed out.

Description:

Waste Type: Steam Condensate

Waste

Description:

Site Code: 100-F-26 Classification: Accepted

Site Names: 100-F-26, 100-F Water Treatment Facility **ReClassification:**

Underground Pipelines

Site Type:Process SewerStart Date:1945Site Status:InactiveEnd Date:1965

Site Status. Inactive End Date.

Site The site encompasses the upstream (pre-reactor) process sewers for the 100-F Area, including all underground water lines used to transport reactor cooling water between water treatment facilities

and the 105-F Reactor Building. These include potentially contaminated underground lines running between buildings and those that run to drainage facilities. Excluded lines consist of those located within buildings and all lines that are downstream of the reactor building, i.e., those lines that carry cooling water from the reactor to the retention basin, trench, and/or the river. Also excluded are those underground lines associated with the Experimental Animal Farm (100-F-29)

and clean water pipelines (100-F-41).

Waste Type: Water

Waste The waste is steel piping, concrete and soil (if any contaminants are present). Chemical additives to the reactor cooling water included aluminum sulfate (alum) with excess hydra

additives to the reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at

about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter.

Site Code: 100-F-29 Classification: Accepted

Site Names: 100-F-29, 100-F Experimental Animal ReClassification: Interim Closed Out (9/15/2003)

Farm Process Sewer Pipelines

Site Type:Radioactive Process SewerStart Date:1945Site Status:InactiveEnd Date:1976

Site The site has been remediated and interim closed out.

Description:

The site consisted of contaminated pipelines that existed at the 100-F Experimental Animal Farm

(EAF) site.

Excluded were the 105-F Reactor effluent disposal pipelines (100-F-19), the 100-F water treatment underground pipelines (100-F-26) to the west, and the clean water pipelines (100-F-41),

which included the raw, fire, sanitary, and fire water pipelines at the 100-F Area.

Waste Type: Water

Waste The waste is mixed (chemically and radiologically) contaminated piping (concrete, steel and

Description: vitrified clay) and contaminated soil. Several radioisotopes were used in varying

concentrations. These included iodine-131, strontium-90, cesium-137, and isotopes of plutonium and uranium. All such research generated contaminated urine and feces. Other

wastes resulted from cleaning contaminated pens and cages with water.

Site Code: 100-F-30 Classification: Rejected (7/29/1997)

Site Names: 100-F-30, 144-F Drywell ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a drywell that was observed on drawing H-1-14123 on the south side of 144-F. During **Description:** a site investigation on 1/2/97, no evidence of a drywell was visible. During the April 1999 visit, a

survey grade GPS was used to locate the site based on its mapped coordinates. No evidence of the site was found at this point. The area is sparsely covered with rabbitbrush and grasses.

Waste Type: Stormwater Runoff

Waste The drywell received stormwater from the roof of the 144-F building.

Description:

Site Code: 100-F-31 Classification: Accepted

Site Names: 100-F-31, 144-F Sanitary Sewer System **ReClassification:**

Site Type: Septic Tank Start Date:

Site Status: Inactive End Date: 1977

Site There was no visible evidence of a sanitary sewer system at this site during a site investigation on

Description: January 2, 1997. During the April 1999 visit, a survey grade GPS was used to locate the site

based on its mapped coordinates. There was no evidence of the site at this point. The coordinates

fall on a dirt road. The area is sandy with cobbles and grass.

Waste Type: Sanitary Sewage

Waste **Description:**

It is unclear from the drawings H-1-14122, Grading Plan Facilities for Radioactive Inhalation Studies and H-1-14123, Plumbing & Details-Facilities for Radioactive Inhalation Studies, whether the site received animal waste as well as human sanitary waste. Since the site serviced the 144-F Building, there is the potential to have received hazardous contaminants.

Site Code: 100-F-32 Classification: Rejected (7/29/1997)

100-F-32, 1717-F Underground Fuel Oil **Site Names: ReClassification:**

Tanks

Storage Tank **Start Date: Site Type: End Date: Site Status:** Inactive

The site is three underground fuel oil storage tanks. Each tank had a capacity of 94,625 liters Site

(25,000 gallons). Each tank was 10.7 meters (35 feet) long and 2.4 meters (8 feet) in diameter. **Description:**

Pipelines ran to the 1717-F Building (Combined Shops) though a pump pit immediately east of

the tanks.

Site Code: 100-F-33 **Classification:** Accepted

100-F-33, 146-F Aquatic Biology Fish **Site Names: ReClassification:**

Ponds

Unplanned Release **Site Type: Start Date: Site Status:** Inactive **End Date:**

Site

Description:

The site is an area where unplanned releases from fish ponds are believed to have occurred.

There is no evidence of the fish ponds at the site where they were originally located. The fish ponds were constructed of unlined reinforced concrete. The configuration of the fish ponds were 6 small rectangular ponds, in a 2 by 3 matrix, one large circular pond located due south of the smaller ponds, and possibly two larger rectangular ponds located between the 6 smaller ponds and the circular pond.

The six small pond structures had outer dimensions of 3.35 meters (11 feet) by 2.90 meters (9.5 feet). Each of the structures had a center dividing wall separating it into two halves. If the outer walls and dividing walls were 15 centimeters (6 inches) thick, the dimensions of each half would have been 1.2 meters (4 feet) by 3.0 meters (10 feet) by 0.9 meters (3 feet) which is the size of a "liquid waste disposal facility" documented in both HW-43121 and HW-33305.

Drawing H-1-2898, Architectural Plot Plan, Aquatic Biology Laboratory, shows the addition of 3 additional ponds. Hanford Drawing, H-1-2898, Sheet 17, Rectangular Ponds - Aquatic Biology Laboratory shows a pair of the pond structures that are 5.8 meters (19 feet) by 3.5 meters (11.5 feet). Each of the ponds is split lengthwise down the middle by a divider. The divider was removable and did not extend the full length of the pond. The ponds sloped towards the end of structure containing the drains (2 drains per structure). The depth of the ponds was 0.91 meters (3 feet) sloping to 1 meter (3.3 feet). There is a note on Drawing H-1-2898 Sheet M-1, Mechanical Plot Plan, Aquatic Biology Laboratory that says that these larger rectangular ponds were not built during 1951-1952 construction. These ponds may never have been constructed. Later drawings show only the six smaller rectangular ponds and the one large circular pond.

Hanford Drawing H-1-2898, Sheet 18, Circular Pond - Aquatic Biology Laboratory shows the large circular pond to be 9.1 meters (30 feet) in diameter and about 0.87 meters (34 inches) high. The pond slopes to the middle where a center drain is located.

Waste Type: Water

Waste If the fish ponds or supporting pipelines had leaked, the waste would contain the same **Description:** contaminants as the radioactive process effluent. A pipeline containing radioactive process

effluent came from the reactor to this site.

Site Code: 100-F-34 Classification: Accepted

Site Names: 100-F-34, Biology Facility French Drain ReClassification: Interim Closed Out (5/22/2002)

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The french drain was removed during the 100-F Area cooling water effluent pipeline remediation

activity in 2002 (100-F-19:1).

Site Code: 100-F-36 Classification: Accepted

Site Names: 100-F-36, 108-F Chemical Pump House, **ReClassification:**

108-F Biological Laboratory

Site Type:LaboratoryStart Date:1944Site Status:InactiveEnd Date:1973

Site Description:

The site was demolished in August of 1999. Most of the building debris and foundations were removed; all exposed piping was cut at the edge of the excavation; the piping trench, sump, and french drain 100-F-15 were removed (the pipe remains at the site); all disturbed areas were graded smooth, and the facility footprint soils were fixed in place with soil cement.

The 108-F building was constructed in 1944 as part of the original Hanford site construction. In 1949, the 108-F building was completely remodeled for use in life-science studies for the effects of radiation and contamination on plant and animal life.

The original 108-F building was a four-story steel frame, concrete block structure with reinforced concrete foundation, and a total floor space of about 1,858 square meters (20,000 square feet). The roof was constructed of concrete tile with a built-up tar and gravel surface. In 1949, and again in 1962, the 108-F building was remodeled, and the floor space increased by the addition of a 1,022 square meter (11,000 square foot) annex. This addition was a three-story concrete block structure adjoining the older building.

The interior of the building contained 39 offices, 47 laboratories, a heavily shielded cobalt-60 source room, 18 rooms for handling small animals, a large conference room, an administrative section, a library, lunch and locker rooms. Since radioactive materials were used in the work performed within the building, the laboratories and storage rooms were maintained in a controlled status until 1973 when the laboratory activities were phased out and transferred to 300 Area facilities.

Waste Type: Soil

Waste Description:

Friable asbestos insulation, asbestos cement, pipe wrapping and suspected asbestos-containing

floor tiles were in the building before demolition.

The 108-F closeout report reported contaminants of concern as mercury, PCBs, lead, asbestos,

sodium dichromate, and miscellaneous low radiological contamination.

Waste Type: Equipment

Waste On the first floor there are exposed sheets of lead, approximately 0.64 centimeters (0.25 inches)

Description: thick under the wallboard. All paint within the facility is suspected to contain lead.

Waste Type: Oil

Waste Oil in the elevator motor, compressor motors, water coolant system and hoist equipment is

Description: suspected to contain polychlorinated biphenyl (PCB) and Resource Conservation and Recovery

Act of 1976 (RCRA) metals.

Waste Type: Equipment

Waste The main drain trench and sump is posted as a radiological contamination area. Potential

Description: contaminants of concern for this facility were plutonium-238, strontium-90, cobalt-60, and

cesium-137.

Site Code: 100-F-37 Classification: Accepted

Site Names: 100-F-37, French Drain Discovered Near **ReClassification:**

Hydrant F-2

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site This french drain was discovered when a trench for electrical conduit was being dug in November

Description: 2000. The trench runs diagonally through the parking lot from the subcontractor trailer to

Hydrant F-2. The buried vitrified clay pipe contained reddish brown, rust coated rocks.

The section of concrete pipe was shipped to ERDF for disposal. The balance of the red-stained

material from the french drain was placed back into the trench and covered.

Waste Type: Soil

Waste The analytical results showed a high level of lead at 214 ppm.

Description:

Site Code: 100-F-38 Classification: Accepted

Site Names: 100-F-38, Yellow Stained Soil Near ReClassification:

Hydrant F-2

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site This waste site consists of yellow soil discovered during the excavation of a trench for electrical

Description: conduit in November 2000. The trench runs diagonally through the parking lot from the

subcontractor trailer to Hydrant F-2.

Waste Type: Soil

Waste The stained soil shows high levels of chromium and lead. No radioactivity was detected with

Description: field instruments.

Site Code: 100-F-39 Classification: Accepted

Site Names: 100-F-39, 100F River Effluent Pipelines, **ReClassification:**

100F River Lines, 100-F-39:1 Flume

Site Type:Radioactive Process SewerStart Date:Site Status:InactiveEnd Date:

Site This site consists of the river effluent pipelines (riverlines) that extend from 1904-F outfall (116-F-

8) in the 100F area into the main channel of the Columbia River. The two riverlines were constructed of 107-centimeter (42-inch) diameter reinforced concrete/steel pipes with 1.3-centimeter (1/2-inch) thick walls. The two parallel lines were originally 91 meters (300 feet

long).

See subsite 100-F-39:1 for information on the flumes that were used to discharge effluent water when the river pipelines were blocked, damaged or undergoing maintenance.

During a survey in 1994, the pipes were found to extend about 24 meters (80 feet) offshore, protruding 1.2 to 2.4 meters (4 to 8 feet) above the riverbed. No buried or exposed pipelines could be found further offshore using geophysical instruments. The pipelines may have been obscured by large pieces of debris or rip rap.

In 1946, damaged sections of pipe were removed from the river and buried in the riverbank. The broken pipe sections were buried in the riverbank just upstream of the outfall and marked with stakes.

Waste Type: Equipment

Waste The waste includes the pipelines and the contaminated scale contained within them.

Description:

Description:

SubSites:

SubSite Code: 100-F-39:1

SubSite Name: 100-F-39:1 Flume from Outfall Structure 116-F-8,

Classification: Accepted

ReClassification:

Description: The flume was used when the river lines were blocked, damaged, or undergoing maintenance,

or when the flow rate exceeded the capacity of the lines.

The upper portion of the flume appears to have been demolished and covered with clean soil. About 7.6 meters (25 feet) of the lower portion of the flume is intact and exposed. The center portion of the flume is covered with soil and it is unclear if it has been demolished.

No warning signs protect the exposed portion of the flume, which is highly accessible to Columbia River boaters and fishermen.

Site Code: 100-F-40 Classification: Accepted

Site Names: 100-F-40, Animal Farm Surface ReClassification: Rejected (2/28/2002)

Impoundment

Site Type: Surface Impoundment Start Date:
Site Status: Inactive End Date:

Site This site, a pair of impoundments and the associated ditches, is no longer visible in the field. It was discovered on aerial photos from 1965, and consisted of two surface impoundments, one

covered with tumbleweeds and the other new and unvegetated. The older impoundment has a slightly meandering ditch coming to its northern end from the animal farm buildings. This ditch was dry in the September 1965 photo. A straight ditch, with water in it in the September 1965 photo, runs to the northern side of the northern impoundment, also coming from the same animal

farm buildings.

Waste Type: Animal Waste

Waste Samples collected in April 2001 determined the surface ponds held only uncontaminated animal

Description: waste resulting from pen cleaning.

Site Code: 100-F-41 Classification: Rejected (3/13/2002)

Site Names: 100-F-41, 100-F Service Water Pipelines, **ReClassification:**

100-F Clean Water Pipelines

Reclassification

Site Type:Product PipingStart Date:Site Status:InactiveEnd Date:

Site The site encompasses the clean water pipelines for the 100-F Area, including underground pipelines used to transport raw, fire, export, and sanitary water from the river pumphouse, to

pipelines used to transport raw, fire, export, and sanitary water from the river pumphouse, to the water treatment facilities and to 100-F Area facilities and fire hydrants. Lines within buildings, process and septic sewer pipes, pipes that carried water treated with sodium dichromate, and all lines that are downstream from the reactor building, i.e., those lines that carry cooling water from

the reactor to the retention basin, trench, and/or the river are excluded.

Waste Type: Equipment

Waste The waste is the old buried pipes from the clean water pipeline system.

Description:

Site Code: 116-F-1 Classification: Accepted

Site Names: 116-F-1, Lewis Canal ReClassification:

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1965

Site The southern portion of the ditch has been backfilled and is posted as Underground Radioactive **Description:** Material. The northern portion of the canal remains open and was released from radiation zone

Material. The northern portion of the canal remains open and was released from radiation zone status. Permanent concrete AC-540 monuments and Underground Radioactive Material signs mark the appropriate areas. The trench headwall has also been buried and no portion of it is

visible.

Two 1.2 meter (4 foot) deep feeder ditches join the main trench laterally from the east. The southern lateral ditch has been backfilled and is covered with grass. It was fed by a 122-

centimeter (48 inch) reinforced concrete pipe. Its headwall is no longer visible and it is not marked or posted. The northern lateral ditch has not been backfilled. It has a concrete headwall that is protected by a double-railed wooden fence that is in poor repair. A 122-centimeter (48-inch) reinforced concrete pipe is visible running from the direction of the 182-F Building. The headwall area is filled with tumbleweeds. This ditch (lateral) is not marled or posted.

Waste Type: Water

Waste Description:

The site received liquid wastes from the 105-F, 182-F, 183-F, and 190-F Buildings and decontamination wastes from the 189-F Building. Reference RHO-CD-827 lists a calculated contaminated soil volume of 2.066E+05 cubic meters (7.3E+06 cubic feet) for the 914-meter (3000-foot) length of Lewis Canal (the length described in most of the documentation for the site). Estimated radionuclide inventories are available in Stenner (1988). Soil sample results are available in Dorian and Richards (1978). The hazardous chemical inventory included sodium dichromate and sulfamic acid. Surface soil and vegetation samples were collected from the areas adjacent to 116-F-1, analyzed for radionuclide concentrations (cobalt-60, strontium-90, cesium-137, plutonium-238, plutonium-239/240), and compared with the results from 1981 through 1986 (Jacques 1986).

Site Code: 116-F-2 Classification: Accepted

Site Names: 116-F-2, 107-F Liquid Waste Disposal ReClassification: Interim Closed Out (3/12/2003)

Trench

Site Type:TrenchStart Date:1950Site Status:InactiveEnd Date:1965

Site The site has been remediated and closed out.

Description:

The site was an open liquid waste trench.

Waste Type: Process Effluent

Waste Description:

The site received cooling water effluent from the 107-F Retention Basin during reactor outages due to fuel ruptures. During deactivation of the 105-F Reactor, the unit received overflow water from the 105-F Storage Basin via the retention basin. RHO-CD-827 lists the calculated volume of contaminated soil to be 2.5E+05 cubic meters (9E+06 cubic feet). Radionuclide inventory for 116-F-2 from Stenner (1988) lists, 0.37 curies of tritium, 0.8 curies of cobalt-60, 0.07 curies of strontium-90, 0.76 of cesium-137, 0.007 curies of plutonium-239, and 6.05 curies of europium-152. The site also has a hazardous chemical inventory that includes 60,000 kilograms (1.3E+05 pounds) of sodium dichromate. The results of four soil sample sites in the trench and four samples taken in the connecting ditch can be found in Dorian and Richards (1978).

Site Code: 116-F-3 Classification: Accepted

Site Names: 116-F-3, 105-F Storage Basin Trench ReClassification: Interim Closed Out (6/16/2003)

Site Type:TrenchStart Date:1947Site Status:InactiveEnd Date:1951

Site The site has been remediated and closed out.

Description:

The contaminated soils have been excavated, but the site has not yet been backfilled. When active, the site had been an east-west oriented open excavation. After deactivation in 1951, the

basin was backfilled with soil and cobbles. It was left unmarked and was not visually discernible. No vent pipes or other appurtenances were visible.

Waste Type: Process Effluent

Waste **Description:** The site received reactor effluent from the 105-F Reactor Building during an early fuel failure outage. In 1951, the site received sludge from the 105-F Storage Basin. During test pit activities in 1993, a buried pipe measuring 150 millimeters (6 inches) in diameter was found buried in the trench at approximately 1.8 meters (6 feet) below surface grade. The pipe was radiologically contaminated reading 500 counts per minute (5000 disintegrations per minute). The contaminates of concern (COC) for this site consist of Europium-152, Europium-154 and Hexavalent chromium.

116-F-4 Site Code: Classification: Accepted

Site Names: 116-F-4, 105-F Pluto Crib **ReClassification:** Interim Closed Out (11/8/2001)

Start Date: 1950 **Site Type:** Crib **End Date:** 1952 **Site Status:** Inactive

Site The site has been remediated and closed out.

Description:

The unit consisted of a french drain-type distribution system. A 0.61-meter (2-foot) riser was attached to a bottomless 208-liter (55-gallon) drum that drained into a cobble leach field.

Process Effluent Waste Type:

Waste **Description:** The site received coolant water from pressure tubes containing ruptured fuel elements. It was estimated that 280 curies of fission products were discharged to the crib during its operation (Dorian and Richards 1978). It was also assumed that the contaminated soil occupied a volume

of 6 by 6 by 7.6 meters (20 by 20 by 25 feet).

116-F-5 **Site Code: Classification:** Accepted

Site Names: 116-F-5, Ball Washer Crib **ReClassification:** Interim Closed Out (8/16/2001)

Site Type: Crib **Start Date:** 1954 **Site Status: End Date:** 1964 Inactive

Site **Description:** The site has been remediated and closed out. The 116-F-5 Crib has been fully backfilled and appears today as an unmarked, gravel-covered field. No vent pipes or other appurtenances remain.

The crib was fed by a 76-meter (250 foot) long vitrified clay pipeline that ran from the 105-F Reactor Building, at which point a 10.2-centimeter (4-inch) schedule 40 steel pipe was used. The pipeline was about 1.2 meters (4 feet) below grade. The vitrified clay pipe consisted of 1.2-meter (4-foot) sections. The bell ends were sealed with lead rings. The pipeline ended in a 3 by 3 by 2.7-meter (10 by 10 by 9-foot) excavation filled with cobble. Approximately 36.5 meters (120 feet) of the pipe, from 116-F-5 to the north end of the 116-F-4 excavation, was removed in 1993 during the 100 Area Excavation Treatability Test. The remaining 39.5 meters (130 feet) of pipe is

part of site 100-F-26 for remedial action.

Waste Type: Process Effluent Waste Description:

The site received liquid waste associated with the decontamination of boron steel balls. Contaminants included strontium-90, cesium-137, europium-154, and europium-155. The waste also included nitric acid that was used for decontamination. However, sampling done in 1997 found only cobalt-60 and europium-155 to be above background levels.

The Cleanup Verification Package lists the final contaminants of concern (COCs) based on the Sampling and Analysis Plan (DOE 2000) as cesium-137 and cobalt-60.

Site Code: 116-F-6 Classification: Accepted

Site Names: 116-F-6, 1608-F Liquid Waste Disposal **ReClassification:**

Trench, 105-F Cooling Water Trench

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1965

Site The site was an open excavation used to receive reactor cooling water. The site appears today as **Description:** a large, cobble-covered field with sparse vegetation. No vent pipes or other appurtenances are

evident.

Waste Type: Process Effluent

Waste Description:

The site received water diverted during reactor shutdowns when maintenance was necessary on the effluent system. This practice was used during several reactor upgrades. Contaminants would include, europium-152, cobalt-60, europium-154, cesium-137, and sulfamic acid (3,000 models).

kilograms [6600 pounds]).

Site Code: 116-F-7 Classification: Accepted

Site Names: 116-F-7, 117-F Crib, 116-F-7 Seal Pit **ReClassification:**

Water Crib

Site Type:CribStart Date:1960Site Status:InactiveEnd Date:1965

Site

Description:

The unit is filled with gravel and covered with clean soil. The crib is marked by a 122-centimeter (48-inch) diameter steel vent pipe. Hanford Drawing H-1-19825 shows the crib's construction. The bottom is about 5.2 meters (17 feet) below grade and is 6.1 meters (20 feet) square. The steel vent marking the site is located in one corner of the crib and is placed on a concrete slab 1.8 meters (6 feet) square and 20 centimeters (8 inches) thick. The vent itself is constructed of 91-centimeter (36-inch) steel pipe. A distribution piping system of 15-centimeter (6-inch) perforated asbestos cement pipe, forming a cross, lies just beneath a polyethylene vapor barrier about 0.6 meters (2 feet) below grade. The remainder of the crib is filled with washed river-run gravels. The site includes the pipeline that originated at the 117-F Building and terminated at the crib site. The feed pipe is 10.16-centimeter (4-inch) cement asbestos pipe.

The 116-F-7 Crib is located in open, sage-covered terrain. It is easily identified by its large metal vent. No identification markers or warning signs exist at this waste site.

Waste Type: Process Effluent

Waste The site received drainage from confinement exhaust system filter seal pits in the 117-F

Description: Building.

Boring 7-A (Dorian and Richards 1978) appears to have been drilled very close to the center of the crib and a sample was collected at a depth of 3 meters (10 feet). Analysis of this material shows concentrations of 0.032 picocuries/gram for cesium-137, 0.057 picocuries/gram for strontium-90, 0.1 picocuries/gram for plutonium-239/240, and 0.26 picocuries/gram for europium-152.

Site Code: 116-F-8 Classification: Accepted

Site Names: 116-F-8, 1904-F Outfall Structure ReClassification:

Site Type:OutfallStart Date:1945Site Status:InactiveEnd Date:1965

Site The outfall site currently is an earthen mound. It is posted as an Underground Radioactive

Description: Material area.

Waste Type: Process Effluent

Waste Reactor water from the 107-F Basin was piped to the outfall structure that discharged into the **Description:** Columbia River. The outfall could have also received reactor water that had been diverted for

fish studies and other process wastes from the Experimental Animal Farm.

Site Code: 116-F-9 Classification: Accepted

Site Names: 116-F-9, Animal Waste Leaching Trench ReClassification: Interim Closed Out (10/16/2002)

Site Type:TrenchStart Date:1963Site Status:InactiveEnd Date:1976

Site The site has been remediated and closed out.

Description:

The site was a leaching trench that received waste water from the cleaning of animal pens in the Experimental Animal Farm. The pipelines that originated at the 141-C Building and terminated at

the trench are documented in 100-F-29.

Waste Type: Animal Waste

Waste The site received wash waste water from the cleaning of animal pens.

Description:

Waste Type: Soil

Waste Contaminants found during sampling in 1979 included cesium-137, cobalt-60, europium-152,

Description: europium-154, europium-155, strontium-90, plutonium-238, plutonium-239/240. The total

estimated radioactive inventory (1979) of the 116-F-9 Animal Leach Trench contaminated soil

column was 4.1 curies (See Memorandum from V. R. Richards to J. J. Dorian).

Site Code: 116-F-10 Classification: Accepted

Site Names: 116-F-10, 105-F Dummy Decontamination ReClassification: Interim Closed Out (6/14/2003)

French Drain, 116-F-8, 105 Dummy/Perf

Decontamination Crib, Perf Decontamination Drain Site Type:French DrainStart Date:1948Site Status:InactiveEnd Date:1965

Site

The site has been remediated and closed out.

Description:

The site consisted of a vitrified clay pipe placed in the ground vertically with approximately 3.0 meters (10 feet) of sand and gravel beneath the tile. The site also included a 10.16-centimeter (4-inch) steel feed pipeline located about 1.2 meters (4 feet) below grade. This pipeline terminated at the "Wash Pad" located in the southeast corner of the 105-F Building fuels storage basin.

Waste Type: Process Effluent

Waste Description:

The site received radioactive water rinses and spent nitric acid from the decontamination of fuel element spacers and other reactor hardware, primarily pressure tube caps. In addition, the site received liquid waste containing 2000 kilograms (4400 pounds) of sodium dichromate, 2000 kilograms (4400 pounds) of sodium oxylate, and 2000 kilograms (4400 pounds) of sodium sulfamate. The site may have received other chemicals as well. Known decontamination solutions at 100-F included chromic acid, citric acid, oxalic acid, sulfamic acid, sulfuric acid, and sodium fluoride. Other chemicals, including organic solvents, were also used for some decontamination processes.

Three soil borings were drilled in the vicinity of the drain in 1975 (Dorian and Richards 1978). Boring 10-A was drilled next to the tile pipe, and borings 10-B and 10-C were completed approximately 3 meters (10 feet) and 9 meters (30 feet) east of the tile pipe respectively. Samples were collected from these borings at depths ranging from 3.8 to 8.2 meters (12.5 to 27 feet). Analytical results indicated elevated concentrations of cobalt-60 (610 picocuries/gram), europium-152 (250 picocuries/gram), europium-154 (31 picocuries/gram), europium-155 (100 picocuries/gram), and cesium-137 (7.4 picocuries/gram) in boring 10-B. Elevated concentrations were not detected in the samples from borings 10-A and 10-C.

Site Code: 116-F-11 Classification: Accepted

Site Names: 116-F-11, 105-F Cushion Corridor French ReClassification: Interim Closed Out (9/15/2003)

Drain

Site Type:French DrainStart Date:1953Site Status:InactiveEnd Date:1965

Site The site has been remediated and interim closed out.

Description:

A 0.9-meter (3-foot) diameter tile pipe was buried vertically with 2.5 to 5 centimeters (1 to 2

inches) extending above grade. The pipe had a metal lid.

Waste Type: Process Effluent

Waste The site received liquid decontamination wastes from the cushion corridor area when reactor **Description:** hardware was decontaminated.

Boring 105-F-A was completed in this area in 1975 (Dorian and Richards 1978). The boring was drilled to a depth of 2.4 meters (8 feet) before terminating due to a concrete obstruction. A soil sample was collected at a depth of 1.5 meters (5 feet) and radionuclide concentrations varied from 0.01 to 5.6 picocuries per gram. Since this boring is approximately 30 meters (100 feet) away from 116-F-11, these results are not likely to be representative of soils near this waste unit.

umi.

Site Code: 116-F-12 Classification: Accepted

Site Names: 116-F-12, 148-F French Drain ReClassification: Interim Closed Out (5/22/2002)

Site Type:French DrainStart Date:1944Site Status:InactiveEnd Date:1964

Site The site has been remediated and interim closed out.

Description:

The drain was excavated during the removal of the 100-F-19:1 effluent pipelines.

Waste Type: Water

Waste This drain would have received minimal amounts of leakage or spillage from two pumps located

Description: in the facility that were used to supply reactor cooling water to the fish studies facilities.

Although Stenner, et al (PNL-6456) states that the site received recovered effluent pump prime, drawings (H-1-459-VOID and H-1-1518) indicate that the site could not have received any

effluent except leakage or spillage from maintenance activities on the pumps.

Site Code: 116-F-13 Classification: Rejected (7/29/1997)

Site Names: 116-F-13, 1705-F Experimental Garden **ReClassification:**

French Drain

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The site has been described as a french drain. A review of documents and drawings has found no **Description:** indication that a french drain ever existed at the 1705-F Experimental Garden. This site appears

indication that a reficient drain ever existed at the 1703-F Experimental Garden. This site appear

to be confused with both the 146-FR fish rearing ponds and the 1607-F6 septic tank.

Site Code: 116-F-14 Classification: Accepted

Site Names: 116-F-14, 107-F Retention Basin, 107-F ReClassification: Interim Closed Out (7/12/2002)

Site Type:Retention BasinStart Date:1945Site Status:InactiveEnd Date:1965

Site The site has been remediated and closed-out.

Description:

The retention basin was a rectangular, concrete-lined, open-top reservoir designed to retain reactor cooling water prior to being discharged to the Columbia River. The basin had an estimated capacity of 5.67E+08 liters (1.5E+08 gallons). It was divided into two equal sections by weir walls running lengthwise from inlet to outlet end. Each section was subdivided by a series of wooden baffles. The site was surrounded by sprinklers (Hanford Drawing H-1-14321) installed on the top of the wall to keep the sludge from drying out during those times when

effluent was not being discharged to the basin.

Waste Type: Demolition and Inert Waste

Waste This site received cooling water effluent from the 105-F Reactor and held it to allow radioactive

Description: decay and thermal cooling prior to releasing the effluent to the Columbia River. Approximately

10 curies of radioactivity had leached into the concrete floor and walls.

Waste Type: Water

Waste This site received cooling water effluent from the 105-F Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Seventy percent of the total radionuclide

inventory was contained within the soil adjacent to the basin.

Site Code: 116-F-15 Classification: Accepted

Site Names: 116-F-15, 108-F Radiation Crib **ReClassification:**

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site Description:

The unit is a 0.91 by 0.91 by 0.91-meter (3-by 3-by 3-foot) concrete sump, near the center of the 108-F Radiobiology Laboratory Building first floor. This concrete sump is likely the "crib" identified by plant personnel in WHC-SD-EN-TI-169, 1993. Historical drawings HW-74552 and HW-74665 show a 46-centimeter (18-inch) floor drain or trench, running the length of much of the ground floor of the 108-F Building. The trench drains from both ends into a sump located in approximately the center of the trench. Many laboratory floor and hood drains are connected to the trench and sump. The trench and sump were covered with plywood and posted as radioactive. A 15-centimeter (6-inch) earthenware pipeline exited the sump and the building to the south. A continuation drawing (W-2934, sheet 5) that would show the route and destination of the pipeline is no longer available. Hanford Drawing H-1-2037 shows a 20-centimeter (8-inch) vitrified clay tile pipe that runs south, then east, from the western side of 108-F to the ash pit. Although there is no clear connection between the sump and the pipelines known to run to the ash pit, there is a strong possibility they are interconnected.

Several documents that would likely discuss this site, if it was a crib, do not make such a reference (WHC-SD-EN-TI-169 1993). These documents include Herman (1965a, 1965b), Stenner et al, (1988), Kiser (1988), and Clukey (1954, 1956). The noted omission from acknowledged texts casts doubt on the existence of this waste site as a crib.

Waste Type: Process Effluent

Waste Description:

Prior to 1996, the unit had not been sampled for radiological or chemical contamination. It is known that alpha contamination experiments were conducted in the 108-F Building. The sump is reported to have received liquid wastes from the 108-F Building sinks, glovebox drains, and ventilation hoods. Since alpha contamination experiments were conducted at the 108-F Building, there is a potential for alpha contamination to be associated with this waste site.

Site Code: 116-F-16 Classification: Accepted

Site Names: 116-F-16, PNL Outfall ReClassification:

Site Type:OutfallStart Date:Site Status:InactiveEnd Date:

Site The upper portions of the site have been demolished and covered with soil. The lower portion of

Description: the flume is intact and visible.

Waste Type: Animal Waste

Waste The unit received animal sewage, 107-F Retention Basin water from fish studies, and low-level

Description: contamination resulting from various Experimental Animal Farm projects.

Site Code: 118-F-8 Classification: Accepted

Site Names: 118-F-8, 105-F Reactor Building **ReClassification:**

Site Type:ReactorStart Date:1944Site Status:InactiveEnd Date:1965

Site Description:

The site is an inactive plutonium production reactor. The unit consists of a reactor block with associated shielding and controls, an irradiated fuel storage basin, and contaminated portions of

the reactor building.

The reactor rests on a 7.0-meter (23-foot) thick concrete foundation topped with cast iron blocks that served as a thermal shield. The building walls consist of reinforced concrete in the lower portions and concrete blocks in the upper portions with thickness varying from 0.9 to 1.5 meters (3 to 5 feet). The roof is composed of precast concrete roof tile, except for the discharge area enclosure and inner horizontal rod room where the roofs are composed of 1.8-meter (6-foot) thick reinforced concrete.

The reactor core consists of a graphite "stack" that measures 8.5 meters (28 feet) from front to rear, 11.0 meters (36 feet) from side to side, and 11.0 meters (36 feet) from top to bottom. The stack is pierced front to rear by 2,004 process channels that held the fuel elements. Nine horizontal channels for control rods enter from the left side and 29 vertical channels for safety rods enter from the top. Six test holes labeled A through F, leading from the right, existed for the irradiation of experiments, foils, counters, ionization chambers, and special samples. The horizontal control road (HCR) and vertical safety rod (VSR) channels, as well as the test holes, were lined with a thin sheet of aluminum known as a "thimble".

The graphite core is surrounded by a cast iron thermal shield layer. Cooling for the top, side, and bottom shields was provided by circulating water tubes embedded in the blocks. The entire reactor block then was enclosed in a welded steel box that functioned to confine the inert gas atmosphere within the reactor. Expansion joints were placed on the corners of the block to allow for thermal expansion and expansion bellows were located at each process tube opening. The bellows served as gas seals as the process tubes expanded and contracted with temperature and with the distortions of the graphite.

The fuel storage basin is located at the rear of the reactor. The concrete basin area served as a collection, storage, and transfer facility for the irradiated fuel elements discharged from the reactor. The water in the basins served both as coolant and as shielding. The basin consists of a discharge chute and fuel element pickup area, a storage area, a transfer area, and a wash pad area.

Waste Type: Equipment

Waste This unit contains an estimated 16,000 curies of radionuclides, 85,300 kilograms (94 tons) of

Description: lead, and 13.6 kilograms (30 pounds) of cadmium.

Waste Type: Asbestos (friable)

Waste The site is estimated to contain less than 2.83 cubic meters (100 cubic feet) of asbestos.

Description:

SubSites:

SubSite Code: 118-F-8:1

SubSite Name: 118-F-8:1, 105-F Reactor Ancillary Support Areas (Module 1)

Classification: Accepted

ReClassification:

Description: Module 1 (Subsite 1) includes the areas that provided ancillary support during reactor

> operations. The support areas include office areas, the reactor control room, tool storage rooms, restrooms, cooling water influent areas, change rooms, ventilation equipment areas,

and electrical systems areas.

SubSite Code: 118-F-8:2

SubSite Name: 118-F-8:2, 105-F Reactor Areas Within Shield Walls, Module 2

Classification: Accepted

ReClassification:

Description: Module 2 (Subsite 2) is the area inside the shield walls, including the reactor block, inner rod

room, work area, 3X Ball System, VSR winch assembly mechanism area, and laboratories.

SubSite Code: 118-F-8:3

SubSite Name: 118-F-8:3, 105-F Reactor Fuel Storage Basin

Classification: Accepted

ReClassification:

Description: The fuel storage basin, located on the south side of the 105-F Building, was the underwater

collection, storage, and transfer facility for irradiated fuel elements discharged from the reactor. This area includes the fuel element discharge pickup area, fuel storage area (basin),

fuel transfer area, and wash pad area.

In 1970 the basin was pumped until 0.6 meters (2 feet) of water remained, where sediment/sludge and miscellaneous items were found (fuel buckets, fuel spacers, process tubes, tongs, wooden floor decking, and monorail pieces). Fine streambed sand was then

placed into the remainder of the basin (5.4 meters [18 feet])

Site Code: 126-F-2 Classification: Accepted

Site Names: 126-F-2, 183-F Clearwells **ReClassification:**

Site Type: Dumping Area Start Date: 1945 1965 **Site Status:** Active **End Date:**

The unit consists of covered, reinforced concrete basins, having a capacity of about 3.7E+07 liters Site **Description:**

(1E+07 gallons), separated in the center by a pump room. Part of the concrete cover on both

clearwells has been demolished to permit dumping into the clearwell cavity. The pump room was reinforced concrete and largely below grade. The above-ground portion of the pump room has been demolished, and the below-ground portion has been filled with pump room rubble and backfill. Approximately 25% of the east clearwell basin contains waste. The west clearwell

remains intact.

Waste Type: Demolition and Inert Waste

Description:

Waste The unit now contains demolition waste from demolished facilities. This waste includes rubble

> from the uncontaminated portion of 115-F as well as rubble from such noncontaminated facilities as 183-F, 190-F, 189-F, 185-F, 171-F. The rubble is believed to include asbestos

siding tiles from several buildings.

The site has been included in the Remaining Sites Record of Decision, and is listed as having "possible low-level radioactive waste."

Site Code: 128-F-2 Classification: Accepted

Site Names: 128-F-2, 100-F Burning Pit ReClassification:

Site Type:Burn PitStart Date:1945Site Status:InactiveEnd Date:1965

Site Originally, the pit was an irregularly shaped depression that was used for burning wastes. The site

Description: has since been covered over and appears today as a flat surface with no sign of the burn pit or its

contents. The pit appears to have been filled and leveled in preparation for the installation of soil

sampling test well 199-F5-42.

Waste Type: Misc. Trash and Debris

Waste Nonradioactive, combustible materials (e.g., vegetation, office waste, paint waste, and chemical **Description:** solvents) have been burned at the site. There are also some large metal materials present at the

site, such as hardware, machinery, and other noncontaminated miscellaneous equipment.

Site Code: 132-F-1 Classification: Accepted

Site Names: 132-F-1, 132-F-1 Chronic Feeding Barn, **ReClassification:**

141-F, 141-F Sheep Barn

Site Type:LaboratoryStart Date:Site Status:InactiveEnd Date:

Site The site was a building that was used to house animals during radiation dose studies. The **Description:** building has been demolished. When in use, the site was an "L-shaped" concrete block building

with a concrete floor and concrete animal pens located both inside and outside of the building.

with a concrete from and concrete animal pens rocated both inside and outside of the building.

Waste Type: Demolition and Inert Waste

Waste Residual strontium-90, cesium-137, and plutonium-239 contamination may remain in any buried

Description: debris.

Site Code: 132-F-2 Classification: Rejected (7/29/1997)

Site Names: 132-F-2, 132-F-2 Inhalation Laboratory, **ReClassification:**

144-F, 144-FB

Site Type: Laboratory Start Date:
Site Status: Inactive End Date:

Site The site was a laboratory that was part of the Experimental Animal Farm. The building has been

Description: demolished. It was a rectangular one-story, 302 square meter (3,250 square foot), concrete block building. The building contained an office, laboratories, and indoor and outdoor animal runs.

During the April 1999 visit, a survey grade GPS was used to locate the site using its mapped

coordinates. A wooden stake was found in the ground at those coordinates. No evidence of the

site was found. However, the area had been disturbed by heavy equipment, concrete chunks were visible and vegetation was sparse.

Site Code: 132-F-3 Classification: Accepted

Site Names: 132-F-3, 115-F Gas Recirculating Facility **ReClassification:**

Site Type:Burial GroundStart Date:1943Site Status:InactiveEnd Date:1965

Site Description:

This site is the below grade remaining material from the decommissioning of the 115-F Gas Recirculating Facility. The building was demolished in-situ using Allowable Residual Contamination Level (ARCL) methodology. At present, the site looks like a gravel parking lot that is free of any debris.

When in operation, the site was a single-story, reinforced concrete structure, 6.1 meters (20 feet) high. The unit's dimensions were 51.2 meters (168 feet) long, 29.9 meters (98 feet) wide, with 4.0 meters (13 feet) below grade. An operating gallery extended down the center and was flanked on either side by cells that contained the gas processing equipment. The equipment cell walls and floors were 0.9 meters (3 feet) thick. At right angles to the operating gallery and extending across the full width of the west end was the service section, which contained the ventilation fan, air compressor, office, locker room, etc. A pipe tunnel 11.0 meters (36 feet) wide by 2.4 meters (8 feet) high ran beneath the full length of the building. The main gas lines to and from the 105-F Building entered through this tunnel.

Waste Type: Demolition and Inert Waste

Waste Description:

The resident radionuclides are tritium, carbon-14, cobalt-60, strontium-90, cesium-137. Surface smears taken in the facility over a 100-square centimeter (15.5-square inch) area revealed alpha contamination of less than 200 disintegrations per minute (dpm) on all surfaces tested. The maximum direct reading of 15,000 counts per minute (cpm) was recorded in the east end of the piping tunnel that connected the gas recirculation facility to the reactor (Chattin and Powers 1985).

Site Code: 132-F-4 Classification: Accepted

Site Names: 132-F-4, 116-F Reactor Stack, 116-F **ReClassification:**

Reactor Exhaust Stack, 132-F-4 Reactor

Stack Demolition Site

Site Type:Burial GroundStart Date:1944Site Status:InactiveEnd Date:1965

Site Description:

This site is the in-place burial site of the 116-F Reactor Stack. The 116-F Stack was a reinforced concrete structure 61 meters (200 feet) high with a base diameter of 5.05 meters (16.58 feet) and a maximum thickness of 0.46 meters (18 inches) at the base. The stack rested on a double octagon-shaped base which extended 5.3 meters (17.5 feet) below grade. The interior of the unit contained 4.2 microcuries of radioactive materials. The stack was demolished by explosive demolition into a trench and then was broken into pieces smaller than 1 meter (3 feet) in diameter. Afterwards, all of the loose rubble was pushed into the trench and backfilled. The site was then graded to match the surrounding terrain. The stack is considered to be released unrestricted under Allowable

Residual Contamination Level (ARCL) methodology.

Waste Type: Demolition and Inert Waste

Waste Description:

The estimated radionuclide inventory for the 116-F Stack prior to demolition was 5.0 picocuries/gram. This amount was calculated from the concentration of nuclides over the interior of the stack to a depth of 1 centimeter (0.39 inches). The radionuclides found were tritium, carbon-14, cobalt-60, strontium-90, cesium-137, europium-152, and plutonium-239.

Testing performed on several of the reactor stacks in the 100 Area prior to decommissioning showed that the stacks contained residual quantities of radionuclide materials on their interior surfaces. Standard smear testing performed over a 100-square centimeter (15.5-square inch) area on these surfaces showed the presence of tritium at concentrations of 400 to 13,000 picocuries per square centimeter and carbon-14 at concentrations of 200 to 2.1E+07 picocuries per square centimeter (Dorian and Richards 1978). Beta-gamma activity from other radionuclides was also identified.

Site Code: 132-F-5 Classification: Accepted

Site Names: 132-F-5, 117-F Filter Building **ReClassification:**

Site Type:Burial GroundStart Date:1960Site Status:InactiveEnd Date:1965

Site Description:

The ventilation exhaust filter building housed blowers and particulate and activated carbon filters used to treat the ventilation exhausted from the F Reactor Building. The unit and duct work were all made of reinforced concrete, 0.3 to 0.6 meters (1 to 2 feet) thick. The building was 10.7 meters (35 feet) high with 2.4 meters (8 feet) above ground.

Waste Type: Process Effluent

Waste Description:

The radionuclides found in the 117-F Building are tritium, carbon-14, cobalt-60, cesium-137, strontium-90, europium-154, and europium-152. During the decommissioning of the facility, surface smears over 100-square centimeter (15.5-square inch) areas in the building revealed betagamma contamination of less than 200 counts/minute and alpha contamination less than 500 counts/minute.

Site Code: 132-F-6 Classification: Accepted

Site Names: 132-F-6, 1608-F Waste Water Pumping **ReClassification:**

Station, 1608-F Effluent Pumping Station,

132-F-6 Lift Station

Site Type:Pump StationStart Date:1944Site Status:InactiveEnd Date:1965

Description:

Site

The site had been a facility was used to pump water from the 105-F Reactor Building drains into the reactor cooling water effluent line. The unit was constructed of reinforced concrete, 4.0 meters (13 feet) above grade and 10.4 meters (34 feet) below grade. The unit included a wastewater collection pit. The site includes pipelines from the 105-F Reactor Building to the 1608-F Building and from the 1608-F Building to the underground effluent lines or the 116-F-6 Liquid Waste Disposal Trench. H-1-19822 describes the pipeline as a 12 inch (30.5 centimeter) steel, however, another section is described as 24 inch (61 centimeter) vitrified clay pipeline. It does not include the buildings or structures where the pipelines terminate. The area where the demolished facility once stood is currently a cobble covered field.

Waste Type: Demolition and Inert Waste

Waste Description:

Before demolition, this site received water from reactor building drains containing trace amounts of low-level radionuclides and decontamination chemicals (primarily Turco). Radionuclides were primarily miscellaneous activation products, including tritium, carbon-14, cobalt-60, strontium-90, cesium-137, europium-152, and europium-154. The decontamination chemicals consisted of sodium fluoride, oxalic acid, and citric acid. Water was pumped from the reactor collection pits into the reactor effluent lines near the 105-F Reactor Building and became part of the 107-F effluent that was discharged to the Columbia River. During decommissioning of the facility in 1987, a survey of the walls, ceilings, and floor areas of the main floor, pump room, switch gear room, and valve room revealed direct beta-gamma contamination to less than 200 counts/minute (cpm). The maximum contamination levels recorded were for the floor areas of the sumps at 5,000 to 25,000 counts/minute (cpm) direct beta-gamma.

During the Dorian and Richards (1978) study in 1975-1976, samples were collected from a soil boring identified as location 132-F-6. Analytical results of material collected in this boring at depths of 7.6 meters (25 feet) and 9 meters (30 feet) revealed elevated concentrations, with a maximum of 92 picocuries/gram for europium-152.

Site Code: 182-F Classification: Accepted

Site Names: 182-F, 182-F Reservoir ReClassification:

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1977

Site Description:

The above-grade portion of the facility has been demolished. Based upon a visit to the site on October 4, 1993, the unit is located on a relatively flat area north of the 183-F Demolition and Inert Waste Landfill (183-F Clearwells). A lower borrow area is located immediately north of the site. Soil in the area is extremely rocky with predominantly cobble-sized rocks. Predominant vegetation at the site includes rabbitbrush, cheatgrass, and Russian thistle. The only evidence of the 182-F Reservoir that was found is the road leading to the south entrance of the facility.

During the April 1999 visit, no debris was visible at the site except for some metal cables. Some pieces of wood and concrete were seen near the edges of the access road. The ground surface was fairly level and very cobbly. A small subsidence approximately 0.6 meters (2 feet) in diameter was observed near the southern edge of the site. The area was well vegetated with a variety of grasses and 0.6 to 0.9 meter (2 to 3 foot) tall rabbitbrush. Few tumbleweeds were seen.

Waste Type: Demolition and Inert Waste

Waste Description:

This unit received demolition rubble from the 182-F Pumping Station and the 183-F Water Treatment Building and Sedimentation Basins, and debris from other building demolitions. The

unit was covered with fill from adjacent land.

Site Code: 1607-F2 Classification: Accepted

Site Names: 1607-F2, 1607-F2 Septic Tank, 124-F-2, ReClassification: Interim Closed Out (3/11/2003)

1607-F2 Sanitary Sewer System

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1988

Site The site has been remediated and closed out.

Description:

The unit included a septic tank, tile field and associated pipeline. The unit was 4.6 meters (14.9

feet) deep, constructed of reinforced concrete, and had a 522-person capacity (130 liters [35 gallons] per capita) with an average detention period of 24 hours. The walls and floor were 25 centimeters (10 inches) thick. The tile field was constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a minimum of 2.4 meters (8 linear feet) per capita. The laterals were open jointed, spaced 2.4 meters (8 feet) apart. The tile field was irregularly shaped, measuring approximately 90.3 meters (296 feet) by 54.0 meters (177 feet).

Waste Type: Sanitary Sewage

Waste Description:

This unit received unknown amounts of sanitary sewage from the 184-F Powerhouse, the 185-F Chemical Treatment Building, the 190-F Pumphouse, the 105-F Reactor Building, the 108-F Building, and the 1700 Administration and Service Buildings. The unit now services the 105-F and 108-F Buildings only. The other buildings have been demolished. Since the site serviced both the 105-F and 108-F Buildings, there is the potential to have received hazardous contaminants. The sludge in the septic tank was measured and sampled as part of the Group 4 Remedial Design Field Investigations. The sludge volume was estimated to be 49,970 liters (13,200 gallons). Sample numbers B0LC76, B0LC77, B0LC78 and B0LC82 were analyzed for metals, volatile organics and semi-volatile organics. Radionuclides were determined by Gamma Spectroscopy. Polyaromatic hydrocarbons were identified as well as elevated levels (above background) of cobalt-60, cesium-137, strontium-90, europium-154/155, radium-226, plutonium-238,239/240 and uranium-234, 235/238. The estimated dose rate from the tank sludge is 157.2 millirem per year.

Site Code: 1607-F3 Classification: Accepted

Site Names: 1607-F3, 1607-F3 Septic Tank, 124-F-3, ReClassification:

1607-F3 Sanitary Sewer System

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1965

Site Description:

The unit includes a septic tank, drainfield and associated pipeline. It is constructed of reinforced concrete; the walls and floor are 25 centimeters (10 inches) thick. The septic tank has a capacity of 5432.07 liters (1435 gallons). The system could support 41 persons assuming input of 132.49 liters (35 gallons) per capita per day and a one day retention period. The drainfield is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a total of 100 linear meters (328 linear feet) of piping (2.4 linear meters [8 linear feet] per capita). The 20 centimeter (8 inch) laterals are open jointed and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from the 182-F Pump Station, the 183-

Description: F Water Treatment Plant, and the 151-F Substation.

Site Code: 1607-F4 Classification: Accepted

Site Names: 1607-F4, 1607-F4 Septic Tank, 124-F-4, ReClassification:

1607-F4 Sanitary Sewer System

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1965

Site The site includes a septic tank, drainfield, and associated pipeline. The tank is constructed of reinforced concrete; the walls are 20 centimeters (8 inches) thick, and the floor is 15 centimeters

(6 inches) thick. The septic tank has a capacity of 794.94 liters (210 gallons). The system could support 6 persons assuming input of 132.49 liters (35 gallons) per capita per day and a one day retention period. The drainfield is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a total of 14.6 linear meters (48 linear feet) of piping (2.4 linear meters [8 linear feet] per capita). The laterals are open jointed and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from the 115-F Gas Recirculation **Description:** Building. There is the potential for the site to have received hazardous contaminants from the

115-F Building.

Site Code: 1607-F5 Classification: Accepted

Site Names: 1607-F5, 1607-F5 Septic Tank, 124-F-5, ReClassification:

1607-F5 Sanitary Sewer System

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1965

Site The site includes a septic tank, drainfield, and associated pipeline. The tank is constructed of reinforced concrete; the walls are 20 centimeters (8 inches) thick, and the floor is 15 centimeters.

reinforced concrete; the walls are 20 centimeters (8 inches) thick, and the floor is 15 centimeters (6 inches) thick. The septic tank has a capacity of 794.94 liters (210 gallons). The system could support 6 persons assuming input of 132.49 liters (35 gallons) per capita per day and a one day retention period. The drainfield is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a total of 14.6 linear meters (48 linear feet) of piping (2.4 linear meters [8 linear feet] per capita). The laterals are open jointed and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from the 181-F Pumphouse.

Description:

Site Code: 1607-F6 Classification: Accepted

Site Names: 1607-F6, 1607-F6 Septic Tank, 124-F-6, ReClassification: Interim Closed Out (11/8/2001)

1607-F6 Sanitary Sewer System

Site Type:Drain/Tile FieldStart Date:1945Site Status:InactiveEnd Date:1975

Site The site has been remediated and closed out.

Description:

The 1607-F6 Sanitary Sewer System was below grade. It included two old tanks, a new tank, a tile field, and pipelines. The old "tanks" were constructed of two 0.91-meter (3-foot) lengths of 91-centimeter (36-inch) concrete pipe connected in series. The pipes were sealed to a wood planking base with asphalt and had wood plank covers. The new tank was constructed of a 1.91-meter (6-foot 3-inch) section of 183-centimeter (72-inch) diameter steel pipe installed vertically with an attached bottom and two layers of tongue and groove planking for the top. The tank is shown on drawing H-1-1518 to have a 61-centimeter (24-inch) by 61-centimeter (24-inch) square access hole at the surface.

Waste Type: Sanitary Sewage

Waste Description:

This unit received sanitary sewage from the 146-F and 146-FR Buildings. The amount of waste received is unknown. Since the site serviced both the 146-F and 146-FR Buildings, there is the potential to have received hazardous contaminants.

Waste Type: Sanitary Sewage

Waste Description:

Waste site contaminants of concern (COCs) and contaminants of potential concern (COPCs) identified through process knowledge are listed in the 100 Area Remedial Action Sampling and Analysis Plan (SAP) (DOE-RL 2000a). Because a portion of the septic system drainfield piping was located over the 100-F-19 Reactor cooling water effluent pipelines, the COC/COPC lists for both sites were combined for the CVP. The COCs listed below are attributed to the 100-F-19 Reactor cooling water effluent pipelines, while the COPCs are attributed to the 1607-F6 site. Waste site COCs include: Carbon-14, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Nickel-63, Strontium-90. COPCs include: Lead, Polychlorinated biphenyls

(PCBs), Semivolatile organic compounds.

Site Code: 1607-F7 Classification: Accepted

Site Names: 1607-F7, 141-M Building Septic Tank, 124- **ReClassification:**

F-7

Site Type:Septic TankStart Date:1945Site Status:InactiveEnd Date:1975

Site Description:

The site is a septic tank, tile field, and a pipeline. The site is identified by a few pieces of broken concrete that are located in the same area shown on drawing H-1-13850 Sheet 2. A piece of partially buried, rusty sheet metal was also observed in the area. The area shown is generally flat and grassy. The tile field is located under an area that was used for animal grazing (pasture).

Waste Type: Sanitary Sewage

Waste The site received sanitary sewage from the 141-M Building.

Description:

Site Code: UPR-100-F-1 Classification: Accepted

Site Names: UPR-100-F-1, 141 Building Sewer Line ReClassification: Interim Closed Out (9/15/2003)

Spill, UN-100-F-1, 141-C to 141-M Sewer

Line Leak

Site Type: Unplanned Release Start Date: 1971

Site Status: Inactive End Date:

Site The site has been remediated and interim closed out.

Description:

The site was an unplanned release that occurred on March 13, 1971.

Waste Type: Animal Waste

Waste The spill consisted of wash water used to clean out animal pens. The water contained 4.0E-5

Description: curies of strontium-90 and 1.06E-6 curies plutonium-239.

Site Code: UPR-100-F-2 Classification: Accepted

Site Names: UPR-100-F-2, Basin Leak Ditch, 107-F ReClassification: Interim Closed Out (4/23/2002)

Basin Leak Ditch, 100-F-3

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

Waste Type: Process Effluent

Waste The waste was radioactive process liquid effluent from the 107-F Retention Basin.

Description:

Site Code: UPR-100-F-3 Classification: Accepted

Site Names: UPR-100-F-3, Mercury Spill ReClassification: Interim Closed Out (8/14/2003)

Site Type: Unplanned Release Start Date: 1977

Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was an unplanned release that occurred at the northeast corner of the 146-FR Fish

Laboratory (demolished).

Waste Type: Chemical Release

Waste The waste was an unplanned release of mercury. The quantity is unknown.

Description:

100-FR-2

Site Code: 100-F-1 Classification: Rejected (7/29/1997)

Site Names: 100-F-1, 100-FR-2 Depression ReClassification:

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The site is a depression surrounded by a post and chain barricade with warning signs stating

Description: "DANGER, KEEP AWAY." The surface of the depression is grass-covered. The site may be the

location of a valve box along the raw water line that went from 190-C to the Pump House for the Radiological Science Laboratory Building and the Grazing Plot. During the April 1999 visit, metal and wooden stakes were observed on the ground and a soil gas probe was visible.

Site Code: 100-F-2 Classification: Accepted

Site Names: 100-F-2, Strontium Garden, PNL ReClassification: Interim Closed Out (7/25/2002)

Ecological Study Strontium Garden

Site Type:LaboratoryStart Date:1952Site Status:InactiveEnd Date:1970

Site The site has been remediated and closed out.

Description:

The site was a garden plot consisting of twelve 1.2 by 3 meter (4 by 10 feet) plots arranged in two rows of six plots each. The area was surrounded on all sides and overhead by a wooden frame with 0.63-centimeter (0.25-inch) screen material attached. Hanford Drawing SK-1-2847, Sheet 2 shows it measured 24 by 9 meters (80 by 30 feet). In 1997, a site visit confirmed that the

dimensions of the site were 24 meters (80 feet) by 9.4 meters (31 feet).

Waste Type: Soil

Waste The waste was contaminated soil. Approximately 39 microcuries of strontium-90 and 120

Description: microcuries of cesium-137 were added to the soil for botany experiments.

Site Code: 100-F-14 Classification: Accepted

Site Names: 100-F-14, 100-FR-2 Vent Pipe, 100-F ReClassification:

Carpenter Shop Waste Site Vent

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The site is a steel vent pipe that extends above grade. The above grade pipe is 10 centimeters (4)

Description: inches) in diameter with a 180 degree bend at its top. The top points downward at its tip which is fitted with a year assembly. Steel fence posts surround the year pine. During the April 1999 visit

fitted with a vent assembly. Steel fence posts surround the vent pipe. During the April 1999 visit, several soil gas probes were observed. The area is fairly level with sandy soil and has a moderate

cover of grasses. A concrete foundation pad is found just to the east of the site.

Waste Type: Water

Waste Description:

Site Code: 100-F-15 Classification: Accepted

Site Names: 100-F-15, 108-F Building Ventilation **ReClassification:** Interim Closed Out (7/25/2002)

French Drain, Undocumented

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The french drain was constructed of concrete buried to a depth that placed the upper drain surface at grade level. A highly degraded wooden cover was in place over the drain. The bottom of the drain consisted of soil and large gravel, which supported a five-gallon carboy container. A copper tube connected the exhaust duct from the third floor, room # 302, to the carboy.

Waste Type: Water

Waste Description:

The drain received condensate that formed inside several large hood ventilation ducts mounted externally on the east wall of the building. Condensate formed during cold weather and ran through 2.5-centimeter (1-inch) stainless steel lines to the drain. The quantity of waste received is not known.

A bottle containing 3 gallons of liquid from the 100-F-15 french drain was characterized between 05/07/96 and 08/08/96. A radiological survey of the bottle was conducted using field detection equipment and the resulting readings showed less than detectable. A sample from the liquid was collected and sent to the laboratory for chemical and radiochemistry analysis. The resulting analysis was received on 08/28/96 and indicated the liquid contained above threshold amounts of radiological and hazardous material (i.e., plutonium and chromium). Specifically, the chemical constituents analyzed for were TCLP Metals, Inorganic Ions, and Total Cyanide, and the radiological constituents were GEA, Gross Alpha, Gross Beta, Strontium-90, Isotopic Plutonium, and Total Uranium.

Site Code: 100-F-20 Classification: Accepted

Site Names: 100-F-20, PNL Parallel Pits ReClassification:

Site Type: Trench Start Date: 1962

Site Status: Inactive End Date:

Site The site consists of two earthen pits or trenches, both oriented northeast to southwest.

Description:

The waste site is not described in the record sources normally used to identify and characterize reactor area burial grounds and burn pits.

Today, the area is covered with cheat grass and rabbit brush vegetation. Evidence of surface disturbance is visible. Bricks and subsidence were observed at the site, but the exact location of the trenches is not visually discernible from the surface. Blue wooden stakes remain at the site

from geophysical surveys.

Waste Type: Misc. Trash and Debris

Waste Description:

A retired Hanford employee was interviewed in 1995. He clearly remembered delivering waste to the pits. The southern pit may have received radioactively contaminated animal feces (mostly sheep) and pen sweepings, small quantities of animal tissue, and miscellaneous Experimental Animal Farm wastes. The northern pit may have received non-radioactive Experimental Animal

Farm wastes including hardware, lumber, and soft materials. Neither of these pits was used as a burn pit. Potential contaminates include: Co-60, Sr-90, Pu-239/240

Site Code: 100-F-28 Classification: Accepted

Site Names: 100-F-28, Septic Tank and Drainfield ReClassification: Rejected (1/29/2003)

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site This site was a septic tank and its drainfield for an isolated office building, discovered on a 1954

Description: drawing. No septic tank or markers were found during a field investigation at this site. The tank's mapped location placed it within an area that was excavated to a depth of between 3.1 and 4.6

meters (10 and 15 feet) for fill material. The area was lightly vegetated with cheatgrass and shrubs.

Waste Type: Sanitary Sewage

Waste The unit would have received sanitary sewage. Because the unit appears to have supported only **Description:** one building and that building is not near any contaminated facilities, it is highly unlikely that it

one building and that building is not near any contaminated facilities, it is highly unlikely that it received any radiological contamination.

Site Code: 100-F-35 Classification: Accepted

Site Names: 100-F-35, Soil Contamination Area inside ReClassification: Interim Closed Out (6/16/2003)

the 105-F Exclusion Area

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was a posted Soil Contamination Area with no distinguishing features.

Waste Type: Soil

Waste An area of radiologically contaminated soil, reading 60,000 disintegrations/minute was

Description: identified within the 105-F Exclusion Area. The ground contamination was the result of a large

container placed in this area to hold contaminated soil removed from 116-F-4 Crib. Soil samples from 116-F-4 Crib identified strontium-90 and cesium-137 as the major contaminants.

Site Code: 118-F-1 Classification: Accepted

Site Names: 118-F-1, Minor Construction Burial **ReClassification:**

Ground No. 2, Burial Ground No. 1, Solid

Waste Burial Ground No. 2

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1965

The site is a burial ground that received radioactive equipment and other miscellaneous wastes

Description: from 100-F Reactor operations. There are three unlined trenches and a pit present at the site. The

trenches are oriented north-south and are typically 91 meters (300 feet) long by 6.1 meters (20

feet) wide. The site appears as a cobble-covered, open field.

The 118-F-1 Burial Ground combines two locations formerly called Minor Construction Burial Ground No. 2 and Solid Waste Burial Ground No. 2. Solid waste from 105-F Reactor Building construction work was put into two holes in 1954 and covered with soil to grade in late 1955 or early 1956. Adjacent to this site, on the south side, a solid waste burial ground was opened in 1955 and extended on two subsequent occasions. Miscellaneous solid waste was buried in the 2 trenches, oriented north and south, and covered to grade with a minimum of 0.6 meters (2 feet) of soil. West of these trenches a number of pits containing irradiated process tubing and dummy elements were similarly covered. A third trench on the east side of the burial ground was used during July and August 1965, for burial of gun barrel tips, steel sleeves, and metal chips removed from the reactor. Filter boxes containing reactor graphite chips were also buried in the trench which was then backfilled to grade with 1.2 meters (4 feet) of soil cover. A pit near the west side of the site was used during the same period for burial of miscellaneous surface contaminated waste and was subsequently backfilled with approximately 1.8 meters (6 feet) of soil cover. The boundary of the burial ground is permanently marked by posts numbered F-65-1 through F-65-21

Waste Type: Equipment

Waste Description:

This site received radioactive reactor components and hardware (dummy elements, process tubing, etc) and other miscellaneous radioactive solid wastes. Potential contaminates include:

Co-60, Sr-90, Pu-239/240

Site Code: 118-F-2 Classification: Accepted

Site Names: 118-F-2, Burial Ground No. 2, Solid Waste ReClassification:

Burial Ground No. 1

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1965

Site

Description:

This burial ground, formerly called "Solid Waste Burial Ground No. 1," was the original solid waste disposal site for the 100F Area. Eight trenches contain miscellaneous solid waste from 105-F and one trench contains solid waste from the biology facilities. According to historical documentation, these trenches were covered to grade prior to 1956. The individual trenches are oriented north and south and are typically 76 meters (250 feet) long by 6.1 meters (20 feet) wide. Several cylindrical sleeves, measuring 5.5 meters (18 feet) long and 1.8 meters (6 feet) in diameter, were used for disposal of animal carcasses and liquid waste from 108-F, and were covered with approximately 1.8 meters (6 feet) of soil in 1955.

A 2002 Geophysical Investigation identified nine caissons 1-meter in diameter, roughly at grade on the northwest side of the burial ground. These caissons are located in a mound of soil, running north-south and about 5 feet high. Uncertainty exists whether these caissons could be the same as the cylindrical sleeves because they measure 1.8 meters in diameter. Additionally, the coordinates for the sleeves from HW33305 (Clukey 1954) places them 90 meters to the west of the caissons.

GPR data from the northern portion of the site indicate considerable disturbed areas which precludes easy and accurate delineation of possible trenches.

Waste Type: Equipment

Waste The site contains miscellaneous radioactive solid wastes, reactor components and hardware. **Description:** Potential contaminates include: Co-60, Ni-63, Sr-90, Cs-137, Eu-152, Eu-154, U-238, Pu-238,

Pu-239/240, chromium, lead, mercury

Waste Type: Animal Waste

Waste The burial ground contains several long metal pipes with wooden lids used to dispose of

Description: contaminated animal carcasses.

Site Code: 118-F-3 Classification: Accepted

Site Names: 118-F-3, Minor Construction Burial

Ground No. 1, Burial Ground No. 3

Site Type:Burial GroundStart Date:1952Site Status:InactiveEnd Date:1952

Site The waste site is an open field covered with cobbles. No vegetation is growing on the ground

Description: surface. The southern half of the burial ground runs in a north-south direction and the northern

half angles toward the west forming a dogleg.

Waste Type: Equipment

Waste The site received irradiated reactor parts that were removed during the project to convert the **Description:** 105-F Reactor from the Liquid 3X to the Ball 3X safety systems. The parts primarily included

vertical safety rod thimbles and step plugs. Thirty-eight thimbles are known to have been buried

ReClassification:

there and possibly as many as 61. The principal radionuclide was short-lived cobalt-60.

Site Code: 118-F-4 Classification: Accepted

Site Names: 118-F-4, 115-F Pit, 115-F Crib ReClassification:

Site Type:CribStart Date:1949Site Status:InactiveEnd Date:1949

Site The unit is a small unlined disposal pit. The area appears today as an open field covered with

Description: cobbles. No vegetation grows on the surface.

Waste Type: Chemicals

Waste The site contains 270 kilograms (0.3 tons) of silica gel removed from a gel tower in one of the

Description: 115-F dryer rooms.

Site Code: 118-F-5 Classification: Accepted

Site Names: 118-F-5, PNL Sawdust Pit, PNL Sawdust **ReClassification:**

Respository, Battelle Sawdust Pit

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1975

Site The site is a single, unlined trench that received radioactive sawdust from the floors of animal

Description: pens in the 100F Experimental Animal Farm. The site now appears as a large raised mound.

Prior to backfilling, the site consisted of several trenches oriented north and south.

Waste Type: Animal Waste

Waste Description:

The site contains low-level activity sawdust and other solids from floors of dog kennels and swine pens. A facsimile sent from W. D. Richmond to M. R. Schneller on March 31, 1971 contains an estimate that the site had received 15 curies of strontium-90 and 0.3 curies of plutonium-239. The site was active and still receiving waste when the facsimile was sent. The facsimile is included in Appendix D of WHC-EP-0087.

Site Code: 118-F-6 Classification: Accepted

Site Names: 118-F-6, PNL Solid Waste Burial Ground ReClassification:

Site Type:Burial GroundStart Date:1965Site Status:InactiveEnd Date:1973

Site The site is an unlined burial ground that received animal and laboratory wastes related to the 100F

Description: Experimental Animal Farm. A 2002 Geophysical investigation of this burial ground identified six

north south trending trenches. The site burial ground is designated by HPS-AC-5-40 concrete

markers.

Waste Type: Animal Waste

Waste This unit contains animal and laboratory wastes including plutonium-238 contaminated animal

Description: ash. The site did not receive reactor related waste.

Site Code: 118-F-7 Classification: Accepted

Site Names: 118-F-7, 100-F Miscellaneous Hardware **ReClassification:**

Storage Vault, Concrete Box

Site Type:StorageStart Date:1945Site Status:InactiveEnd Date:1965

Site The site is an inactive solid waste storage vault used for temporary storage of slightly

Description: contaminated reactor parts. The vault is a light-colored concrete box that extends approximately

46 centimeters (18 inches) above grade. It has a wooden lid that is covered with green rolled roofing material. The lid is posted as Underground Radioactive Material. The site is not fenced.

Waste Type: Equipment

Waste This site served as temporary storage for miscellaneous reactor hardware. In 1965, contamination levels within the box were 200 to 300 counts-per-minute. There is some

confusion in existing documentation as to whether equipment still remains in the vault. Table 11 of Miller and Wahlen (WHC-EP-0087) reports that 134,700 kilograms (148.3 tons) of lead of

5,600 kilograms (6.2 tons) of cadmium remains in the vault. Appendix A of the same report states that the vault contains only a small amount of radioactive material. DeFord (1993) reports

that site personnel believe that the vault is empty.

Site Code: 118-F-9 Classification: Accepted

Site Names: 118-F-9, PNL Rad Site **ReClassification:**

Site Type: Burial Ground Start Date:
Site Status: Inactive End Date:

Site The site contains one trench running east to west. It appears to have been backfilled and

Description: vegetation has re-established itself. The site is not marked or posted.

Site Code: 120-F-1 Classification: Accepted

Site Names: 120-F-1, Glass Dump ReClassification:

Site Type:TrenchStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is an inactive trench that runs east to west. Earth from excavation has been mounded at the west end of the trench. The dump site is protected by a 30.5 by 30.5-meter (100 by 100-foot) chain barrier attached to metal posts. "Danger - Do Not Enter" signs hang from the chain. An inner barrier delineates the trench and is posted "Cave-In Potential". The original access road is overgrown with 0.9-meters (3-foot) high sagebrush, indicating this site has not been used for many years.

Waste Type: Misc. Trash and Debris

Waste The site is covered with approximately 0.61 meters (2 feet) of fluorescent tubes, incandescent light bulbs, instrument vacuum tubes, and small AAA, C, and D batteries. The site also contains

an assortment of chemical bottles, both large and small.

Site Code: 126-F-1 Classification: Accepted

Site Names: 126-F-1, 184-F Powerhouse Ash Pit, 188-F **ReClassification:**

Ash Disposal Area

Site Type:Coal Ash PitStart Date:1944Site Status:InactiveEnd Date:1965

Description:

1965. Coarse textured bottom ash and boiler slag are evident at the site. The 126-F-1 Ash Pit is located with the general 100-F Radiologically Controlled Area. The northern portion of the ash pit is delineated with AC-540 concrete markers (approximately 2.4 hectares [6 acres]) and is posted as an Underground Radioactive Material area. The remaining 18 acres of ash is part of the 100 F Area general Radiologically Controlled Area and is not separately posted.

The ashpit is the result of the 100-F Area coal fired steam plant that operated between 1944 and

Waste Type: Ash

Waste Description:

Unknown amounts of coal ash from the 184-F Powerhouse were sluiced to this unit with raw river water. The ash has been analyzed using the EP Toxicity Test in accordance with Washington Administrative Code (WAC 173-303), and no hazardous materials were found. This site also received low-level radionuclides from effluent system leakage. Radioactive contamination in excess of 50,000 counts/minute exists in the northwest corner of the pit.

Site Code: 128-F-1 Classification: Accepted

Site Names: 128-F-1, 100-F Burning Pit, 100-F Burning ReClassification:

Pit No. 1

Site Type:Burn PitStart Date:1945Site Status:InactiveEnd Date:1965

Site The site was used to dispose of solid waste from the 100F Area. The site has been backfilled.

Description:

Waste Type: Misc. Trash and Debris

Waste The site was used for the disposal of nonradioactive, combustible materials, such as paint waste,

Description: office waste, and chemical solvents.

Site Code: 128-F-3 Classification: Accepted

Site Names: 128-F-3, PNL Burn Pit **ReClassification:**

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site has been backfilled and is now covered with annual weeds. The surface has a thin layer **Description:** of coal and coal ash mixed with fine sandy soil. Scraping the surface a few inches reveals black

of coal and coal ash mixed with fine sandy soil. Scraping the surface a few inches reveals black ash or coal dust. Nothing on the soil surface distinguishes this site from other coal ash dumping

sites found along the dirt road just south of the ash disposal pit.

Waste Type: Misc. Trash and Debris

Waste It is not known what was burned at the site. However, Pacific Northwest Laboratory (PNL) and Description: Westinghouse Hanford Company (WHC) employees verified that the site was used for burning.

It is assumed the burned material came from the Experimental Animal Farm.

Site Code: 1607-F1 Classification: Accepted

Site Names: 1607-F1, 1607-F1 Septic Tank and **ReClassification:**

Associated Drain Field, 124-F-1, 1607-F1 Sanitary Sewer System, 1607-F1 Septic

Tank

Site Type: Septic Tank Start Date: 1944
Site Status: Inactive End Date: 1965

Site The unit includes a septic tank, drain field and associated pipeline. The septic tank is constructed **Description:** of reinforced concrete; the walls and floor are 25 centimeters (10 inches) thick. The septic tank

has a capacity of 16561.18 liters (4375 gallons). The system could support 125 persons assuming input of 130 liters (35 gallons) per capita per day and a one day retention period. The drain field is constructed of 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile with a total of 304.8 meters (1000 linear feet) of piping (2.4 linear meters [8 linear feet] per capita). The four

laterals are open jointed, 38 meters (125 feet) long, and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Site Code:

Waste This unit received an unknown amount of sanitary sewage from the 1701-F Badge House **Description:** (security checkpoint), the 1709-F Fire Station, and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and the 1720-F Administrative Office and Company of the 1709-F Fire Station and Company of the 1709-F Fire Station

(security checkpoint), the 1709-F Fire Station, and the 1720-F Administrative Office and change room for security patrol personnel. Since the site was connected to administrative and support facilities (security and fire protection), the site should not have received hazardous contaminants.

Classification:

Accepted

Site Names: 600-31, 100-F Area Bottle Disposal Site ReClassification: Rejected (7/29/1997)

600-31

Site Type: Dumping Area Start Date:

Site Status: Inactive **End Date:**

Site The site is a sandy area with rabbitbrush growing throughout. It exhibits physical evidence that **Description:**

the dumping of laboratory materials took place. The area also appears to have been disturbed by

a blade or bulldozer.

During the April 1999 visit, scattered debris was visible, composed primarily of glass with some metal and wood debris. The glass is found in a swath on the west side of a sandy rise. There is a moderate vegetation cover of rabbitbrush and grasses on the sandy rise with less cover on the

disturbed ground.

Waste Type: Misc. Trash and Debris

Waste Wastes identified are laboratory-type bottles and bottle caps with the following markings on some of the caps: 1) Sulfuric 2) Mallinckrodt, 3) Bakers, 4) B & A, 5) Fisher. The markings **Description:**

and colors on the bottles and caps indicate they most likely contained laboratory chemicals (e.g.

nitric acid, sulfuric acid, hydrochloric acid, etc).

100-HR-1

Site Code: 100-H-1 Classification: Accepted

Site Names: 100-H-1, 105-H Rod Cave ReClassification: Interim Closed Out (3/26/2001)

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site This site has been remediated and closed out.

Description:

Other rod caves, such as the 105-C Horizontal Control Rod Cave and the 100-K Area Horizontal Control Rod Caves, consisted of sections of metal culvert pipe on a concrete pad with an earthen mound. This rod cave was not as advanced a construction as other rod caves, but was similar in construction. End walls at other rod caves were formed of concrete, but the end walls at this site were made of lead bricks.

The cave was about 12.1 meters (40 fee) long and 2.1 meters (7 feet) wide. The rod cave was about 1.4 meters (4.5 feet) high and partially buried.

Waste Type: Equipment

Waste The site was contaminated from horizontal control rods and possibly other miscellaneous reactor

Description: facility components. The ends were constructed from lead bricks.

Site Code: 100-H-3 Classification: Accepted

Site Names: 100-H-3, 1716-H Garage Fuel Tank Site **ReClassification:**

Site Type: Storage Tank Start Date: 1949

Site Status: Inactive End Date:

Site The site may contain one or more underground storage tanks (USTs) from the 1716-H Garage. **Description:** The garage has been demolished. Some disturbance of the concrete pavement is visible at the site.

Site Code: 100-H-4 Classification: Accepted

Site Names: 100-H-4, 1717-H Hot Shop, French Drain, ReClassification:

and, Contaminated Storage Unit

Site Type:Maintenance ShopStart Date:Site Status:InactiveEnd Date:

Burial Site, 107-H Buried Sludge Site,

Site The french drain cannot be visually located.

Description:

Waste Type: Water

Waste Description:

Site Code: 100-H-5 Classification: Accepted

Site Names: 100-H-5, 107-H Retention Basin Sludge ReClassification: Interim Closed Out (12/18/2000

Sludge Disposal Trench, 107-H Grave

Site Type: Burial Ground Start Date: 1953

Site Status: Inactive End Date:

Site This site has been remediated and closed out. The trench was about 100 meters (328 feet) long,

Description: 16 meters (52 feet) wide, and 4.6 meters (15 feet) deep.

Waste Type: Sludge

Waste In 1975, samples of sludge from the basin floor had a maximum Geiger-Mueller (GM) probe

Description: reading of 20,000 counts/minute. Samples had an average concentration of 3.1E+04

picocuries/gram beta/gamma and 57 picocuries/gram of plutonium-239/240. The sludge buried

in the trench would have similar characteristics.

Site Code: 100-H-6 Classification: Rejected (8/8/1997)

Site Names: 100-H-6, Suspect Waste Site: ReClassification:

Contaminated Ramp

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is a contaminated concrete ramp connected to the 105-H Reactor Building. The concrete

Description: ramp is enclosed in heavy wire mesh and is posted as a "Contamination Area".

Site Code: 100-H-7 Classification: Accepted

Site Names: 100-H-7, French Drain A ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a vertical, 76-centimeter (30-inch) diameter vitrified clay pipe with a metal lid. Its

Description: upper surface is at grade. It is suspected to be a french drain. A 6.3 centimeter (2.5 inch) steel

pipe exits the reactor building at a point in line with the drain, suggesting the possibility of

drainage from the 105-H Building to the drain. The drain has no markings.

Waste Type: Process Effluent

Waste

Description:

Site Code: 100-H-8 Classification: Accepted

Site Names: 100-H-8, French Drain B ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The unit is a 91-centimeter (36-inch) diameter concrete pipe with a steel lid. The drain is buried

Description: vertically with its upper surface at grade and is filled with gravel to within 20 centimeters (8

inches) of its top. It is suspected to be a french drain. The drain is surrounded by a rope and

posts and signs that read "Danger - Keep Out".

Waste Type: Process Effluent

Waste Description:

Site Code: 100-H-9 Classification: Accepted

Site Names: 100-H-9, French Drain C ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The unit is a vertical 61-centimeter (24-inch) diameter concrete pipe with a rusted metal lid. It is

Description: suspected to be a french drain. The drain has no markings.

Waste Type: Process Effluent

Waste

Description:

Site Code: 100-H-10 Classification: Accepted

Site Names: 100-H-10, French Drain D ReClassification:

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The unit is a vertically buried 122-centimeter (48-inch) diameter vitrified clay pipe with a steel

Description: lid. It is suspected to be a french drain. The unit has no markings.

Waste Type: Process Effluent

Waste

Description:

Description:

Site Code: 100-H-11 Classification: Accepted

Site Names: 100-H-11, Expansion Box French Drain E **ReClassification:**

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site This unit is a vertical 76-centimeter (30-inch) diameter steel manhole set in concrete that provides

access to a french drain below. It appears to be a french drain located at the bottom of a concrete expansion box in which a 152-centimeter (60-inch) steel effluent line makes a 40-degree turn to

the southwest. It appears the drain was installed to provide drainage for any leaks in the

expansion box. The drain has no markings.

Site Code: 100-H-12 Classification: Accepted

Site Names: 100-H-12, Expansion Box French Drain F **ReClassification:**

and Shielding Lead

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a french drain that is accessed through a 0.76-meter (30-inch) vertical steel manhole set in a concrete pad. The french drain is located at the bottom of a concrete expansion box, in which a 1.5-meter (60-inch) steel reactor effluent pipeline makes a 90-degree turn from south to east. The french drain appears to have been installed to provide drainage for any leakage that might occur in the expansion box. The drain has no markings. The surface of the concrete pad in which the manhole is set is covered with lead bricks, completely covering the manhole. Site personnel indicate the lead brick was installed as shielding for the high dose rate associated with the expansion box. Hanford Site drawings P-1758, P-1759, and P-1756 show the locations of the expansion box, drain, and manhole. In 1998, the area where the drain is located was covered with dirt. The drain could not be visually identified.

Waste Type: Process Effluent

Waste The french drain may have received radioactive process effluent.

Description:

Site Code: 100-H-13 Classification: Accepted

Site Names: 100-H-13, French Drain G ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a french drain that is constructed of vitrified clay pipe. The site has a metal lid with a second metal lid found 15.2 centimeters (6 inches) below the first. A 6.3-centimeter (2.5-inch) stainless steel pipe emerges from the 105-H Reactor Building wall, runs downward to the surface, and disappears at a point in approximate alignment with the site. An asphalt surface repair mark runs through the asphalt from the point where the pipeline enters the ground to the french drain. This suggests the possibility of drainage from the Reactor Building. In 1998, the drain was almost completely covered with debris.

Hanford Site drawings do not identify this drain or its purpose.

Waste Type: Process Effluent

Waste The site is suspected of having received drainage from the 105-H Reactor Building.

Description:

Site Code: 100-H-14 Classification: Accepted

Site Names: 100-H-14, Surface Contamination Zone H ReClassification:

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site

Description:

An area located next to the south wall of the 105-H Reactor Building fuel storage basin has been

surface stabilized with 46 to 61 centimeters (18 to 24 inches) of gravel and cobbles. In 1991, it was delineated by lightweight chain and posted, "Caution: Underground Radioactive Material." A "Surface Contamination Area" sign was posted on the wooden door of the storage basin. A site visit in 1998 found the Underground Radioactive Material posting had been removed. The

wooden door is now posted as a Contamination Area.

Waste Type: Chemical Release

Waste No documentation has been found to identify the source of the contamination or describe the

Description: stabilization activity.

Site Code: 100-H-17 Accepted **Classification:**

100-H-17, 116-H-2 Trench Overflow **ReClassification:** Interim Closed Out (3/1/2001) **Site Names:**

Site Type: Unplanned Release Start Date: 1953

Site Status: Inactive **End Date:**

This site has been remediated and closed out. Site

Description:

Water **Waste Type:**

The technical baseline report lists 116-H-2 contaminants as including cobalt-60, cesium-134, Waste **Description:**

cesium-137, europium-152, europium-154, europium-155, tritium, plutonium-239, plutonium-

240, strontium-90, uranium-235, and uranium-238.

Waste site COCs identified through process knowledge were listed in the 100 Area Remedial Action Sampling and Analysis Plan (DOE-RL 1998). The COCs identified for this site in the CVP consist of plutonium-239/240, yranium-238, strontium-90, cesium-137, cobalt-60,

europium-152, europium-154, and hexavalent chromium.

Site Code: 100-H-18 Classification: Rejected (8/8/1997)

Site Names: 100-H-18, Undocumented Unplanned **ReClassification:**

Airborne Release: Stack Emission No.1

Site Type: Unplanned Release **Start Date:** 1955

Site Status: Inactive **End Date:**

Site There are no posted areas related to this release.

Description:

Waste Type: Process Effluent

Waste The waste consisted of airborne radioactive particulates released through the 105-H stack.

Description:

100-H-19 Classification: Rejected (8/8/1997) **Site Code:**

100-H-19, Undocumented Unplanned Site Names: **ReClassification:**

Airborne Release: Stack Emission No.2

Site Type: Unplanned Release **Start Date:** 1955

Site Status: Inactive **End Date:**

There are no posted areas related to this site. Site

Description:

Process Effluent

Waste Type:

Waste The waste consisted of airborne radioactive particulates released through the 105-H stack.

Description:

Rejected (8/8/1997) Site Code: 100-H-20 Classification:

100-H-20, Undocumented Unplanned **ReClassification: Site Names:**

Release: Swallow Nests and Droppings

Site Type: Unplanned Release Start Date: 1956

Site Status: Inactive End Date:

Site There are no posted areas related to this release.

Description:

Waste Type: Soil

Waste The 107-H Liquid Waste Disposal Trench received highly contaminated cooling water from the

Description: 107-H Retention Basin. The mud used by the swallows would have contained radioactive

contamination from fuel element rupture.

Site Code: 100-H-21 Classification: Accepted

Site Names: 100-H-21, 100-H Reactor Cooling Water ReClassification: Interim Closed Out (3/19/2001)

Effluent Underground Pipelines

Site Type:Radioactive Process SewerStart Date:1949Site Status:InactiveEnd Date:1965

Site This site has been remediated and was closed out in March 2001.

Description:

The site is the underground 100-H Reactor cooling water effluent lines. These include those effluent lines that transported 105-H Reactor cooling water from the reactor to the 116-H-7 (107-H) Retention Basin, and from the basin to the 116-H-5 (1904-H) Outfall Structure and/or to the 116-H-1 Trench. This waste site includes all associated expansion and valve boxes and excludes the retention basin, outfall structure, and those effluent lines that are within the confines of the 105-H Reactor Building. It also excludes all reactor influent lines that are upstream of the reactor building. The site also includes the pipeline(s) from the 1608-H Waste Water Pumphouse to 116-H-2 (1608-H Liquid Waste Disposal Trench).

Waste Type: Process Effluent

Waste Description:

The waste was contaminated steel piping, concrete, and soil. Reactor cooling water became radioactively contaminated as it passed through the reactor core. Activation products created in the water included calcium-41, chromium-51, and zinc-65. Activation products from the reactor core that were picked up and transported by the cooling water included tritium, carbon-14, cobalt-60, nickel-63, and europium-152/154/155. Fuel element fission products such as strontium-90, and cesium-137, as well as transuranics such as plutonium-239/240 were introduced into cooling water due to fuel cladding failures. Concentrations of radionuclides in cooling water during normal reactor operations were approximately 0.2 microcuries/liter. Concentrations of radionuclides built up in rust flakes and scale on the inner surfaces of the pipelines and in sludge in the diversion and junction boxes. Average beta-gamma concentrations for the effluent line scale and junction/diversion boxes were 83,000 and 120,000 picocuries/liter, respectively. Average plutonium-239/240 concentrations were 66 picocuries/gram for the effluent line scale and 720 picocuries/gram for the sludge at the bottom of the diversion and junction boxes. Direct readings of the bottom of the effluent lines averaged approximately 40,000 counts/minute with a Geiger-Mueller probe. Chemicals during water treatment included aluminum sulfate (alum), hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter. The waste was any remaining process effluent and the contaminated pipelines.

Site Code: 100-H-22 Classification: Accepted

Site Names: 100-H-22, Soil Contaminated by Effluent ReClassification: Interim Closed Out (3/19/2001)

Line Leakage

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The release occurred from the reactor cooling effluent lines. Both the lines and the unplanned

Description: release have been remediated and cleaned up.

Waste Type: Process Effluent

Waste Contaminants at the 100-H Area included plutonium, strontium, europium, cobalt, cesium,

Description: uranium, nickel, hexavalent chromium, lead, and arsenic.

Site Code: 100-H-24 Classification: Accepted

Site Names: 100-H-24, 151-H Electrical Facilities, 100- ReClassification: Interim Closed Out (5/9/2001)

H-24 Substation, 151-H Substation

Site Type:Electrical SubstationStart Date:1948Site Status:InactiveEnd Date:1978

Site The site has been remediated and closed out.

Description:

It is the area of the demolished 151-H Substation, which includes the 151-H Building and adjacent Switchyard. The former switchyard area had a layer of crushed gravel with several remaining concrete structures that were used to support electrical equipment. Electrical conduit was observed protruding up from underground areas near the concrete structures. Two manholes that appeared to provide access to the main electrical feeder cables that ran from the switchyard to the 151-H Building were observed near the center of the site. These features were removed during the remedial action excavation of the site.

In the area of the former 151-H Building, the southwest corner of the building appears to be protruding through the ground surface and several pieces of rebar were visible to the north. An area of subsidence was also visible near the former northeast corner of the building. An inactive power pole structure exists off the northeast corner of the site. The railroad spur that serviced the switchyard area has been removed. A former chain link fence, that has been cut off and removed just above ground level, surrounds the site. Demolition debris, such as rebar and broken concrete, was observed in the area of the former 151-H Building.

Note: The soil samples taken in 1991 were located at oil stained sites adjacent to existing concrete transformer foundations. A site visit on 3/20/96 observed that no oil spills or stains were visible at the site.

The 151-H Substation was constructed west of the 105-H Reactor to provide electrical service to the 100-H Area. The 151-H Substation was comprised of a fenced area and a switch house. The fenced area contained two power transformers, overhead static wires, large ground mat, lightning arrestors, and underground 13.8 kV feeders. Outgoing feeder cables were run in underground ducts approximately 60 meters (200 feet) from the substation building to overhead pole lines. The 151-H building contained the 13.8 kV switchgear. The 151-H building was a one story building with a basement. The basement portion contained a sump and conduit openings for underground feeder wires. The main floor housed the switchgear room, battery room, shop, mechanical equipment room, locker room and toilet. The switchgear from this facility was reused at 151-B.

Waste Type: Demolition and Inert Waste

Waste The 151-H Building was demolished in 1978. The demolition debris was placed in the

Description: basement cavity and covered with earth.

Waste Type: Oil

Waste The site contains polychlorinated biphenyls (PCBs) contaminated soil. Seven samples were taken from stained area around the transformer foundations. The sample results indicated the

taken from stained area around the transformer foundations. The sample results indicated the presence of PCBs, however, the PCB levels were below Toxic Substance Control Act cleanup

levels.

Site Code: 100-H-26 Classification: Rejected (8/8/1997)

Site Names: 100-H-26, Grounds Surrounding ReClassification:

Deactivated Areas, Exclusion Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The grounds within the 100-H exclusion area that are not part of other waste sites.

Description:

Site Code: 100-H-28 Classification: Accepted

Site Names: 100-H-28, 100-H Water Treatment ReClassification:

Facilities Underground Pipelines

Site Type:Process SewerStart Date:1949Site Status:InactiveEnd Date:1965

Site The site encompasses the upstream (pre-reactor) process sewers for the 100-H Reactor, including

Description: all underground water lines used to transport reactor cooling water between water treatment facilities and the 105-H Reactor Building. These include all underground lines running between

buildings and those that run to drainage facilities and to the emergency cooling high tanks (water towers). Lines within buildings and all lines that are downstream from the reactor building, i.e., those lines that carry cooling water from the reactor to the retention basin, trench, and/or the river

are excluded.

Waste Type: Water

Waste The waste is steel piping, concrete, and soil (if contaminants are present). Chemical additives to the reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide,

the reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the

free chlorine residual was approximately 0.2 milligrams/liter.

Site Code: 100-H-30 Classification: Accepted

Site Names: 100-H-30, 110-H Sanitary Sewer Trench ReClassification: Interim Closed Out (3/1/2001)

Site Type:TrenchStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out. It was a sanitary sewer trench and feed pipeline.

Description:

Waste Type: Sanitary Sewage

Waste

The unit received unknown amounts of sanitary sewage from the 110-H Building.

Description:

Waste Type: Process Effluent

Waste Description:

The trench is likely to have received radionuclide and chemical contamination from the overflows of the 116-H-2 (1608-H) Crib. The crib received cooling water from the 105-H

Reactor Building during the Ball 3X system upgrade program. The site was used during other

upgrade programs and on the effluent system when maintenance was necessary.

Site Code: 100-H-31 Classification: Accepted

Site Names: 100-H-31, Polychlorinated Biphenyl in Soil ReClassification:

On North Side of 105-H Reactor Building

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site Description:

The site is a gravel area near a former electrical substation with no visible oil stains or vegetation. The adjacent concrete pad has electrical conduit and wiring extending up to the surface where the electrical equipment was removed. The site is not marked or posted. The reactor exclusion fence is posted as Underground Radioactive Material.

The reactor exclusion fence is posted as Danger, Restricted Area, Multiple Hazards, No Entry Without Written Authorization and Underground Radioactive Material

Waste Type: Soil

Waste The waste is polychlorinated biphenyl (PCB) contaminated soil.

Description:

Site Code: 100-H-33 Classification: Accepted

Site Names: 100-H-33, 183-H Solar Evaporation Basins ReClassification:

Radionuclide Components

Site Type:Retention BasinStart Date:1949Site Status:InactiveEnd Date:1985

Site Description:

The 183-H Solar Evaporation Basins (116-H-6) were remediated in 1985 and 1996 and closed out on May 13, 1997, under a Modified Closure signed by Washington State Department of Ecology.

This RCRA closure did not address any radionuclides that were associated with the site.

Consequently, site 100-H-33 was created to address the radionuclide component. Radionuclide COCs that were associated with the site are gross alpha, gross beta, uranium-234, uranium-235,

technetium-99, total uranium, and gamma energy analysis.

The site was backfilled and revegetated in the spring of 1997. No radiological posting is associated with the backfilled basin.

associated with the backfilled basin

Waste Type: Process Effluent

Waste Description:

The facility received routine and nonroutine wastes. The routine wastes consisted of spent acid etch solutions (primarily nitric, sulfuric, hydrofluoric, and chromic acids) generated by the Nuclear Fuel Fabrication process. These acidic solutions were reacted with excess sodium hydroxide before being transported to the 183-H Basins. Metal constituents include copper, silicon, zirconium, nickel, aluminum, chromium, manganese, and uranium, which were in the form of precipitates. Nonroutine wastes consisted of unused chemicals and spent solutions from miscellaneous processes. Beginning in July 1973, radioactive and dangerous (mixed) waste from the 300 Area fuel fabrication facilities was shipped to the basins for storage and treatment. The waste has been designated an Extremely Hazardous Waste (EHW) because of toxicity, waste code (WT01). The basins also received various nonradioactive waste (listed discarded chemical products), resulting in designation for cyanide (P030), vanadium pentoxide (P120), and formic acid (U123). Additionally, Basin #2 was designated EP Toxic because of the presence of chromium (D007). More detailed descriptions of these wastes and quantities are contained in DOE/RL 88-04, Interim Status Closure/Post-Closure Plan 183-H Solar Evaporation Basins.

Additional radionuclide contaminants of concern were identified in the Closure/Post Closure

Site Code: 100-H-34 Classification: Accepted

Site Names: 100-H-34, 100H River Effluent Pipelines, **ReClassification:**

100H River Lines; 100-H-34:1 Flume

Site Type:Radioactive Process SewerStart Date:Site Status:InactiveEnd Date:

Site This site includes the river effluent pipelines(riverlines) that extend from the outfall (116-H-5)

Description: into the main channel of the Columbia River.

See subsite 100-H-34:1 for information on the flume that was used to discharge effluent water when the river pipelines were blocked, damaged or undergoing maintenance.

Waste Type: Equipment

Waste The waste includes the pipelines and the contaminated scale contained within them.

Description:

SubSites:

SubSite Code: 100-H-34:1

SubSite Name: 100-H-34:1, Flume from Outfall Structure 116-H-5

Classification: Accepted

ReClassification:

Description: The flume carried effluent overflow from the outfall to the bottom center of the river for

release. The flume was used when the river pipelines were blocked, damaged or undergoing

maintenance.

In the 100-H Area Technical Baseline Report the flume is identified as an underground concrete sluiceway that led to the river. Also that the slope between the outfall and the riverbank is covered with large basalt riprap boulders that have been mortared in place, extending about 73.15 m (80 yards) north and south of the outfall. The exit end of the underground sluiceway has been covered with concrete rubble and is no longer visible. A

shallow, dish-shaped concrete runoff pad extends across the beach from the sluiceway exit to the low water line. "No Trespassing" signs have been posted on the beach.

Site Code: 100-H-35 Classification: Discovery

Site Names: 100-H-35, 100-H Service Water Pipelines, ReClassification:

100-H Clean Water Pipelines

Site Type:Product PipingStart Date:Site Status:UnknownEnd Date:

Site The site encompasses the clean water pipelines for the 100-H Area, including underground pipelines used to transport raw water from the river pumphouse to the water treatment facilities

and to 100-H Area facilities and fire hydrants. Pipelines excluded from this site include those within buildings, process and sewer pipes, pipes that carried water treated with sodium dichromate, and all lines that were downstream from the reactor building, i.e., those lines that

carried cooling water from the reactor to the retention basin, trench, and/or the river.

Waste Type: Equipment

Waste The waste is the old buried pipes from the clean water pipeline system.

Description:

Site Code: 116-H-1 Classification: Accepted

Site Names: 116-H-1, 107-H Liquid Waste Disposal ReClassification: Interim Closed Out (4/3/2001)

Trench

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1965

Site The site has been remediated and closed out.

Description:

The disposal trench was oriented in a north-south direction and was divided into three separate lobes. The trench was fed by a single 51-centimeter (20-inch) pipe that originated in the pumphouse located at the northwest corner of the 107-H Retention Basin (this pipeline is part of

100-H-21).

Waste Type: Water

Waste The site received diversion effluent from the 107-H Retention Basin during reactor outages due **Description:** to fuel element ruptures and water and sludge from 107-H during deactivation of the unit.

Site Code: 116-H-2 Classification: Accepted

Site Names: 116-H-2, 1608-H Liquid Waste Disposal ReClassification: Interim Closed Out (3/1/2001)

Trench, 1608-H Crib & Trench

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1965

Site This site, including its feed pipe, has been remediated and closed out. It was an open trench that **Description:** was fed by a 15-centimeter (6-inch) vitrified clay pipe that originated from the 1608-H Pump

was led by a 13-centimeter (o-men) vitimed day pipe that originated from the 1008-r

House. The feed pipe is shown on Hanford drawings H-1-19824 and M-1904-H.

W/--4- T ---- W/-4---

waste Type: water

Waste The site received coolant water from the 105-H Reactor Building during the Ball 3X system

Description: upgrade program. The site was used during other upgrade programs and when maintenance was

necessary on the effluent system.

Site Code: 116-H-3 Classification: Accepted

Site Names: 116-H-3, 105-H Dummy Decontamination ReClassification: Interim Closed Out (4/3/2001)

French Drain, Perf Decontamination Drain

Site Type:French DrainStart Date:1950Site Status:InactiveEnd Date:1965

Site This site has been remediated and closed out.

Description:

The site was a french drain made of vitreous tile conduit. The upper surface of the french drain extended a few inches above the ground and had a metal cover. The waste site includes an

underground feed pipeline which is 65 meters (215 feet) in length.

Waste Type: Process Effluent

Waste The site received spent acid and rinse water from the 105-H Dummy Decontamination Facility,

Description: which decontaminated fuel element spacers and other reactor hardware.

Site Code: 116-H-4 Classification: Accepted

Site Names: 116-H-4, 105-H Pluto Crib **ReClassification:**

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1952

Site The site is currently a flat, cobble covered field located inside the 105-H security fence. The crib

Description: location is not marked.

Waste Type: Process Effluent

Waste The site received effluent from tubes containing ruptured fuel elements. A 1953 document reports that approximately 270 curies of fission products were released to the crib as a result of

the rupturing of ten slugs and the presence of 1,000 kilograms (2,200 pounds) of sodium

dichromate.

Site Code: 116-H-5 Classification: Accepted

Site Names: 116-H-5, 116-H-5 Outfall Structure, 1904- ReClassification:

H Outfall Structure, 116-H-5 Outfall

Structure

Site Type:OutfallStart Date:1949Site Status:InactiveEnd Date:1965

Site The site is currently posted as an Underground Radioactive Material area and marked with

Description: permanent concrete markers.

Wasta Tomas Dragge Effluent

waste type: Process Effluent

Waste The site received effluent water through two lines from the 107-H Retention Basin. A third line

Description: from the 100 H Area process sewer also discharged to it.

Site Code: 116-H-6 Classification: Accepted

Site Names: 116-H-6, 183-H Solar Evaporation Basins ReClassification: Closed Out (5/13/1997)

Site Type:Retention BasinStart Date:1949Site Status:InactiveEnd Date:1985

Site Description:

The site was a concrete water storage and treatment basin divided into four sections. Each section was subdivided into a deep subsidence basin and a shallow flocculation basin. The flocculation basin was 14 meters (46 feet) wide, 10 meters (33 feet) long, and 3 meters (10 feet) deep. The subsidence basin was 16 meters (50 feet) wide, 29 meters (95 feet) long, and 5 meters (17 feet) deep at the north end and 5 meters (16 feet) deep at the south end. The deep and shallow basins were separated by a redwood plank weir. The basins had an earthen berm around three sides and an asphalt-covered berm on the north side for tank truck unloading. The basins were completely demolished in the fall of 1996. The site was backfilled and re-vegetated in the spring of 1997. The site is marked. No radiological posting is associated with the backfilled basin.

Waste Type: Process Effluent

Waste Description:

The facility received routine and nonroutine wastes. The routine wastes consisted of spent acid etch solutions (primarily nitric, sulfuric, hydrofluoric, and chromic acids) generated by the Nuclear Fuel Fabrication process. These acidic solutions were reacted with excess sodium hydroxide before being transported to the 183-H Basins. Metal constituents include copper, silicon, zirconium, nickel, aluminum, chromium, manganese, and uranium, which were in the form of precipitates. Nonroutine wastes consisted of unused chemicals and spent solutions from miscellaneous processes. The waste has been designated an Extremely Hazardous Waste (EHW) because of toxicity, waste code (WT01). The basins also received various nonradioactive waste (listed discarded chemical products), resulting in designation for cyanide (P030), vanadium pentoxide (P120), and formic acid (U123). Additionally, Basin #2 was designated EP Toxic because of the presence of chromium (D007). More detailed descriptions of these wastes and quantities are contained in DOE/RL 88-04, Interim Status Closure/Post-Closure Plan 183-H Solar Evaporation Basins.

Site Code: 116-H-7 Classification: Accepted

Site Names: 116-H-7, 107-H Retention Basin, 107-H ReClassification: Interim Closed Out (7/24/2001)

Site Type:Retention BasinStart Date:1949Site Status:InactiveEnd Date:1965

Site This site has been remediated and closed out.

Description:

The basin was a concrete-lined rectangular structure. The unit had been partially demolished and backfilled to a depth of approximately 1.2 meters (4 feet) above the floor, and sloped to the top of the walls.

Waste Type: Process Effluent

Waste This site received cooling water effluent from the 105-H Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Seventy percent of the total radionuclide

inventory is contained within the soil adjacent to the unit. Approximately 10 curies have leached into the concrete floor and walls.

Site Code: 116-H-9 Classification: Accepted

Site Names: 116-H-9, 117-H Crib, 117-H Seal Pit Crib ReClassification:

Site Type:CribStart Date:1960Site Status:InactiveEnd Date:1965

Site The unit is a gravel filled crib. A distribution header lies approximately 1.5 meters (5 feet) below **Description:** grade and is covered by a polyethylene barrier. The polyethylene barrier is covered by 1.2 meters

(4 feet) of clean fill material. A large vent pipe marks the site and is placed off center of the crib structure. The site includes a 10-centimeter (4-inch) cement asbestos feed pipeline that runs from the demolished 117-H Air Filter Building to the crib. The pipeline is approximately 80 meters

(263 feet) long.

Waste Type: Water

Waste The site received drainage from confinement system 117-H Building Seal Pits.

Description:

Site Code: 118-H-6 Classification: Accepted

Site Names: 118-H-6, 105-H Reactor Building **ReClassification:**

Site Type:ReactorStart Date:1949Site Status:InactiveEnd Date:1965

Site The unit consists of: 1) a reactor block, which includes the graphite moderator stack, biological **Description:** and thermal shields, pressure tubes and the safety and control systems; 2) the irradiated fuel

and thermal shields, pressure tubes and the safety and control systems; 2) the irradiated fuel storage basin; 3) the reactor gas recirculation systems; and 4) contaminated portions of the reactor

building.

Waste Type: Equipment

Waste This unit contains an estimated 15,000 curies of radionuclides, 102,000 kilograms (112 tons) of

Description: lead, less than 2.8 cubic meters (100 cubic feet) of asbestos, and 9 kilograms (20 pounds) of

cadmium.

Site Code: 126-H-2 Classification: Accepted

Site Names: 126-H-2, 183-H Clearwells/Disposal Pit **ReClassification:**

Site Type: Dumping Area Start Date: 1975

Site Status: Active End Date:

Site The clearwells were used as a disposal facility for demolition waste from the 183-H Basins. A

Description: portion of the backfilled clearwells is posted with Soil Contamination signs.

Waste Type: Demolition and Inert Waste

Waste The unit now contains nonhazardous and nonradioactive demolition and inert waste from demolished facilities. This waste includes rubble from such facilities as 190-H, 151-H, 1701-D

and the 183-H Solar Evaporation Basins. The following materials were taken to the 183-H Clearwell:

- On (date unknown), 0.78 cubic meters (27.7 cubic feet) of transite from the 1717;
- On 11/10/1986, 125.4 cubic meters (164 cubic yards) of insulators from the Hanford power line cleanup;
- On (date unknown), 0.89 cubic meters (31.5 cubic feet) of transite from the 190 Annex;
- On 9/25/1987, 44.3 cubic meters (58 cubic yards) of non-excessible building equipment from the 1713-H Storage Facility;
- On 3/3/1987, (volume unknown) of galvanized posts and concrete from the perimeter fence;
- On 11/17/1987, 45.9 cubic meters (60 cubic yards) of decommissioned utility fixtures and cross arms;
- On 1/14/1988, 72.6 cubic meters (95 cubic yards) of decommissioned utility guy wires, rebar, and gravel;
- On 1/15/1988, 22.9 cubic meters (30 cubic yards) of decommissioned utility guy wires and concrete;
- On 10/10/1988, 880 used wooden pallets (1.07 by 1.07 meters [3.5 by 3.5 feet]) from the 183-H Basin;
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #1 for 8/30/1990); (radiological release record included);
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #2 for 8/30/1990); (radiological release record included);
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #3 for 8/30/1990); (radiological release record included);
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #4 for 8/30/1990); (radiological release record included);
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #5 for 8/30/1990); (radiological release record included);
- On 8/30/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #6 for 8/30/1990); (radiological release record included):
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #1 for 8/31/1990); (radiological release record included);
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #2 for 8/31/1990); (radiological release record included);
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (60%), wood (30%), insulation (5%), pipe (5%) from 1701-D; (record #3 for 8/31/1990); (radiological release record included):
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (90%), rebar (5%), pipe/conduit (5%) from 1701-D; (record #4 for 8/31/1990); (radiological release record included):
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (90%), rebar (5%), pipe/conduit (5%) from 1701-D; (record #5 for 8/31/1990); (radiological release record included);
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (90%), rebar (5%), pipe/conduit (5%) from 1701-D; (record #6 for 8/31/1990); (radiological release record included);
- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (90%), rebar (5%), pipe/conduit (5%) from 1701-D; (record #7 for 8/31/1990); (radiological release record

included);

- On 8/31/1990, 11.5 cubic meters (15 cubic yards) of cement block (90%), rebar (5%), pipe/conduit (5%) from 1701-D; (record #8 for 8/31/1990); (radiological release record included);
- On 9/7/1990, 9.6 cubic meters (12.5 cubic yards) of roofing asphalt (80%), pipe metal (5%), toilet wood (5%), windows (10%) from 2719-W;
- On 4/26/1991, 245 pallets, 2 cable spools, 53.6 meters (176 feet) of 2 by 6 (9.23 cubic meters [326 cubic feet]) of wood from 100-H;
- On 9/11/1993, 332.6 cubic meters (435 cubic yards) of wood (85%), metal (5%), concrete (10%) from 1722-D and 1713-D; (radiological release record included);
- On 9/12/1993, 137.6 cubic meters (180 cubic yards) of wood (60%), metal (10%), concrete (30%) from 1722-D; (radiological release record included);
- On 11/30/1993, 11.5 cubic meters (15 cubic yards) of material not identified on form from 100-H;
- On 2/22/1994, 1.36 cubic meters (48 cubic feet) of metal (70%), wood (20%), cardboard (10%) from 105-D;
- On 8/10/1994, 0.28 cubic meters (10 cubic feet) of crushed vent ducting (100%) from 105-H; (radiological release survey included);
- On 2/16/1995, 45.9 cubic meters (60 cubic yards) of wood (40%), concrete (40%), steel (40%) from laydown yard, east of the carpenter shop, outside 100-N double fence;
- On 2/16/1995, 45.9 cubic meters (60 cubic yards) of wood (40%), concrete (40%), steel (40%) from laydown yard, east of the carpenter shop, outside 100-N double fence; (record #2 for 2/16/1995);
- On 4/10/1995, 30.6 cubic meters (40 cubic yards) of roofing material, including tar and gravel (asphalt), fiberboard, metal flashing and wood debris from 105-D roof replacement; (radiological release statement included);
- On 4/11/1995, 30.6 cubic meters (40 cubic yards) of roofing material, including tar and gravel (asphalt), fiberboard, metal flashing and wood debris from 105-D roof replacement; (radiological release statement included);
- On 10/23/1995, 2,666.5 cubic meters (3,487.6 cubic yards) of concrete (90%), iron (10%), including superstructure, walls, catwalks, pillars, rebar from 100-H/183-H Solar Basins; (See second waste record);
- On 12/14/1995, 11.5 cubic meters (15 cubic yards) of wood (50%), plastic (40%), metal (10%) from 100-N, N Reactor Deactivation;
- On 10/11/1995, 38.2 cubic meters (50 cubic yards) of wood (99%), soil/metal (1%) from 100-D/190-D demolition;
- On 10/11/1995, 7.6 cubic meters (10 cubic yards) of asphalt/concrete from 100-N waterline upgrade;
- On 10/23/1995, 0.8 cubic meters (1.0 cubic yard) of scrap electrical wire from 100-N potable waterline upgrade;
- On 11/10/1995, 122.3 cubic meters (160 cubic yards) of metal (75%), concrete (10%), wood (10%), conduit (5%) from 100-N, Buildings 1100 and 1101;
- On 2/20/1996, 22.9 cubic meters (30 cubic yards) of asphalt (80%), dirt (20%) from 100-N/Field Deactivation;
- On 3/4/1996, 0.4 cubic meters (0.5 cubic yards) of plastic (100%) from 100-HR-3 Pump and Treat;
- On 5/9/1996, 12.2 cubic meters (16 cubic yards) of iron (5%), tar-rock (95%) from 100-H;
- On 5/11/1996, 12.2 cubic meters (16 cubic yards) of tar (40%), iron (30%), wood (20%), tin (10%) from 100-H;
- On 5/12/1996, 12.2 cubic meters (16 cubic yards) of galvanized metal (60%), wood (40%) from 100-H; (truck #1);
- On 5/12/1996, 12.2 cubic meters (16 cubic yards) of galvanized metal (40%), wood (60%) from 100-H; (truck #2);
- On 5/17/1996, 12.2 cubic meters (16 cubic yards) of tar (95%), iron (5%) from 100-H;
- On 5/18/1996, 12.2 cubic meters (16 cubic yards) of tar (100%) from 100-H; (truck #1)

- On 5/18/1996, 12.2 cubic meters (16 cubic yards) of tar (85%), steel (15%) from 100-H; (truck #2);
- On 5/18/1996, 12.2 cubic meters (16 cubic yards) of tar (100%) from 100-H; (truck #2);
- On 5/19/1996, 12.2 cubic meters (16 cubic yards) of tar-rock (95%), iron (5%) from 100-H;
- On 8/18/1996, 24.5 cubic meters (32 cubic yards) of concrete (80%), iron (20%) from 100-DR:
- On 8/19/1996, 24.5 cubic meters (32 cubic yards) of concrete (80%), iron (20%) from 100-DR:
- On 2/12/1997, 84.1 cubic meters (110 cubic yards) of asphalt (95%), rock (4%), metal (1%) from 100-H/183-H;
- On 4/11/1997, 34.4 cubic meters (45 cubic yards) of old asphalt from 200 West Area, 200-ZP-1 Phase III;
- On 7/16/1997, 15.3 cubic meters (20 cubic yards) of fiberglass insulation from the exterior of the 1715-N Diesel Tanks;
- On 7/15/1997, 22.9 cubic meters (30 cubic yards) of fiberglass insulation from demolition from 163-N roofing;
- On 7/18/1997, 11.5 cubic meters (15 cubic yards) of fiberglass insulation from the exterior of the 1715-N Diesel Tanks;
- On 7/18/1997, 1.5 cubic meters (2 cubic yards) of hatch lid, metal on wood construction from 163-N Roof;
- On 8/7/1997, 7.6 cubic meters (10 cubic yards) of broken asphalt pieces from pipeline road crossings from 100-HR-3 Project;
- On 8/26/1997, 160.6 cubic meters (210 cubic yards) of concrete (80%), rebar (20%) from 100-N/105-NC;
- On 9/25/1997, 107.0 cubic meters (140 cubic yards) of concrete, rebar, metal roofing and miscellaneous steel from 100-N/1734-N;
- On 10/11/1997, 11.5 cubic meters (15 cubic yards) of concrete (90%), wood (10%) from 2614 E2, W2, W4, W5.

Waste Type: Demolition and Inert Waste

Waste Description:

The suspected contaminated waste is concrete and debris from the demolition of the 183-H Solar Evaporation Basins (116-H-6). The area is posted as a soil contamination area. After removal of the surface of the concrete, prior to demolition, all surfaces were surveyed with field instrumentation. The survey results for all surfaces were less than 1,000 disintegrations per minute per 100 square centimeters (15.5 square inches) smearable (loose) contamination and less than 5,000 disintegrations per minute per 100 square centimeters (15.5 square inches) total contamination.

On October 23, 1995, 2,666.5 cubic meters (3,487.6 cubic yards) of concrete (90%), iron (10%), including superstructure, walls, catwalks, pillars, rebar from 100-H/183-H Solar Basins were disposed of in the 183-H Clearwell.

Site Code: 132-H-1 Classification: Accepted

Site Names: 132-H-1, 116-H Reactor Exhaust Stack **ReClassification:**

Burial Site

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1965

Site The unit was part of the 105-H Reactor Gas and Exhaust Air system. It was constructed of reinforced concrete. Prior to demolition the stack was 61 meters (200 feet) tall and had a diameter of 5.1 meters (16.58 feet) at its base. The stack was toppled into a 60.96 meter (200

feet) long by 9.14 meter (30 feet) wide by 5.49 meters (18 feet) deep trench.

Waste Type: Demolition and Inert Waste

Waste Air moving from the least contaminated zones through increasingly contaminated zones was **Description:** discharged to the stack unfiltered. At the time of demolition low-level smearable alpha

contamination was present measuring up to 30 disintegrations/minute per 100 square centimeters (190 disintegrations/minute per 100 square inches). Smearable beta contamination ranged from

100 to 5,000 disintegrations/minute per 100 square centimeters (650 to 32,000

disintegrations/minute per 100 square inches).

Site Code: 132-H-3 Classification: Accepted

Site Names: 132-H-3, 1608-H Waste Water Pumping **ReClassification:**

Station Site, 116-H-8, 1608-H Effluent Pumping Station Site

Site Type:Pump StationStart Date:1949Site Status:InactiveEnd Date:1965

Site The unit was constructed of concrete block walls above ground and reinforced concrete for the

Description: remainder. It was 3.7 meters (12 feet) above grade and 9.8 meters (32 feet) below grade. The

unit included a wastewater collection pit. The building has been demolished in-situ.

Waste Type: Process Effluent

Waste This site received water from reactor building drains and irradiated fuel storage drains

Description: containing trace amounts of low-level radionuclides and decontamination chemicals, primarily

Turco (a commercial chemical compound with a proprietary composition). Radionuclides were primarily activation and fission products. Other decontamination chemicals consisted of sodium

fluoride, oxalic acid, and citric acid.

Site Code: 1607-H2 Classification: Accepted

Site Names: 1607-H2, 1607-H2 Septic Tank and ReClassification: Interim Closed Out (2/5/2001)

Associated Drain Field, Septic System, 1607-H2 Sanitary Sewer System, 124-H-2,

1607-H2 Septic Tank

Site Type:Septic TankStart Date:1949Site Status:InactiveEnd Date:1965

Site The unit includes a septic tank, tile field, and associated piping (about 140 meters (460 feet) from

Description: the tank to the intersection with the Water Treatment Plant pipelines). The site has been

remediated, and a Closeout Verification Package (CVP) has been approved. It is no longer

marked or posted in the field.

Waste Type: Sanitary Sewage

Waste This unit received unknown amounts of sanitary sewage from 182-H, 183-H, 190-H, and all office and maintenance service buildings with "1700" designations. Based on measured sludge

levels, the volume was estimated to be 28,500 liters (7,500 gallons).

Site Code: 1607-H3 Classification: Accepted

Site Names: 1607-H3, 1607-H3 Septic Tank and ReClassification:

Associated Drain Field, 124-H-3, 1607-H3 Sanitary Sewer System, 1607-H3 Septic

Tank

Site Type:Septic TankStart Date:1948Site Status:InactiveEnd Date:1968

Site Th site is a septic tank and drain field. The tank is constructed of concrete and measures 5.6 by **Description:** 2.1 by 4.0 meters (18.5 by 7 by 13 feet) deep. The tank had a 100-person capacity with an

average detention period of 24 hours.

The drain field is constructed of either 10-centimeter (4-inch) vitrified pipe, concrete pipe or drain tile, with 2.4 linear meters (8 feet) per capita. It measures 15 by 30 meters (50 by 100 feet). It is oriented in-line with, and approximately 24 meters (80 feet) from the septic tank. A row of eight

vent pipes is visible. They run perpendicular to the entrance road.

Waste Type: Sanitary Sewage

Waste This unit received unknown amounts of sanitary sewage from the 1701-H Badge House (security **Description:** checkpoint), the 1720-H Security Patrol Change Room, offices, and the 1709-H Fire Station.

The sewage per capita is 130 liters (35 gallons) plus 20% for sludge.

Site Code: 1607-H4 Classification: Accepted

Site Names: 1607-H4, 1607-H4 Septic Tank and ReClassification: Interim Closed Out (2/26/2001)

Associated Drain Field, 1607-H4 Sanitary Sewer System, 124-H-4, 1607-H4 Septic

Tank; Septic System

Site Type: Septic Tank Start Date: 1948

Site Status: Inactive End Date: 1965

Site This site has been remediated and closed out. The unit included a septic tank, tile field, and

Description: associated piping. The system had a six-person capacity and an average detention period of 24

hours. The tile field was constructed of 10-centimeter (4-inch) pipe, 2.4 meters (8 feet) in length.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage from the 181-H River Pumphouse.

Description: The sewage per capita is 130 liters (35 gallons) plus 20% for sludge.

100-HR-2

Site Code: 100-H-2 Classification: Accepted

Site Names: 100-H-2, Buried Thimble Site **ReClassification:** Interim Closed Out (3/1/2001)

Site Type: Burial Ground Start Date: 1953

Site Status: Inactive End Date:

Site This site has been remediated and closed out.

Description:

Waste Type: Equipment

Waste Description:

Site Code: 100-H-15 Classification: Rejected (8/8/1997)

Site Names: 100-H-15, Possible Septic Tank & Tile ReClassification:

Field, 100-H-25

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site appears in a photograph taken in 1950 as a rectangular site enclosed by a white rail fence. In the photograph, a line of disturbed soil is visible extending from the east end of the

fenced area to a point near the southeast corner of the 151-H Electrical Substation. It appears to

terminate at a manhole associated with the 1607-H1 septic tank.

Site Code: 100-H-16 Classification: Accepted

Site Names: 100-H-16, 184-H Salt Dissolving Pit and ReClassification: Rejected (8/12/1997)

Brine Pump House, H Area Power House

Brine Pit, 184-H Brine Pit

Site Type: Sump Start Date: 1948

Site Status: Inactive End Date:

Site The salt dissolving pits and brine pump pit were part of a single below-grade concrete structure that provided brine for the 184-H Powerhouse. No evidence of the structure can be seen today.

The salt dissolving pits each had inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.8 meters (9.25 feet) tall. They had a design high water line 2.4 meters (7.75 feet) from the pit bottom. An overflow slot that connected the two dissolving pits was located 0.3 meters (1 foot) above the high water line. The bottom of each pit was filled with a 12.7 centimeter (5 inch) layer of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The dissolving pits each had a 2.4 meter (8 feet) by 0.9 meter (3 feet) opening at the top for receiving salt. each pit had a capacity of 23,600 kilograms (52,000 pounds) of salt.

Th brine pump pit is located adjacent to the two salt dissolving pits. The pit was 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.1 meters (7 feet) deep. It held two pumps and associated piping (all brass) for the brine system. The floor of the pump pit sloped toward a 46 by 46 centimeters (18 by 18 by 18 inches) sump in a corner. A sump pump discharged to a nearby french drain (100-H-32).

Waste Type: Demolition and Inert Waste

Waste The site was probably demolished in place. No documentation has been located related to

Description: cleanup. It is not known if salt cake was left in the structure.

Site Code: 100-H-27 Classification: Rejected (8/8/1997)

Site Names: 100-H-27, 100-H Area Patrol Headquarters **ReClassification:**

Storm Runoff Ditch

Site Type:DitchStart Date:Site Status:InactiveEnd Date:

Site The site is a ditch that receives stormwater runoff from a nearby asphalt parking areas. The ditch

Description: runs northward from a 15 centimeter (6 inch) vitrified clay pipe that discharged at a headwall. A

site visit in March 1999 found the ditch almost completely filled with tumbleweeds. The ditch is

not marked or posted.

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 100-H-32 Classification: Accepted

Site Names: 100-H-32, 184-H Brine Pit French Drain ReClassification: Rejected (1/30/2003)

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site There is no visual evidence of a french drain at this location. It was likely removed with the

Description: associated brine pit (100-H-16).

Waste Type: Chemicals

Waste The french drain received any water or brine that collected in the 184-H Brine Pit Sump. The **Description:** liquid would be expected to have contained high concentrations of sodium chloride (salt).

Site Code: 118-H-1 Classification: Accepted

Site Names: 118-H-1, 100-H Burial Ground No. 1, 100- ReClassification:

H-1

Site Type:Burial GroundStart Date:1949Site Status:InactiveEnd Date:1965

Site The overall site runs east and west. There are numerous trenches of various dimensions, generally

Description: running north and south. The boundaries are permanently marked with concrete posts numbered

H-65-1 through H-65-23.

Waste Type: Misc. Trash and Debris

Waste The site received activated components and miscellaneous solid wastes (surface contaminated).

Description: Typical examples of activated components are aluminum dummies and process tubing, steel gun

barrels and step plugs, thermocouple wires and balls from the 3X safety system. Portions of several horizontal control rods were buried in slit trenches near the southwest corner of the site. Typical examples of surface contaminated materials are hand tools, rags and sweeping compound, light bulbs, sheets of plastic and paper. This type of material was usually sealed in cardboard boxes and placed in separate trenches from the activated components.

Site Code: 118-H-2 **Classification:** Accepted

Site Names: 118-H-2, H-1 Loop Burial Ground, 100-H **ReClassification:**

Burial Ground No. 2

Burial Ground Start Date: 1955 **Site Type: Site Status:** Inactive **End Date:** 1965

The site runs east and west and contains two in-line concrete vaults. Both vaults were covered to Site **Description:** grade with approximately 3.7 meters (12 feet) of soil. The site boundaries are permanently

marked with concrete posts numbered H-65-24 through H-65-29.

Waste Type: Equipment

Waste The east vault received one stainless steel double tube removed from the reactor in 1955 after **Description:** several years of irradiation. Within the same area there are also solutions which were used to

clean the tube, and miscellaneous capsule components. The west vault was constructed in 1958 and used during deactivation of the 105-H Reactor Building for disposal of a small amount of

contaminated pipe.

Site Code: 118-H-3 Classification: Accepted

Site Names: 118-H-3, Construction Burial Ground ReClassification:

Site Type: Burial Ground Start Date: 1953 **Site Status:** Inactive **End Date:** 1957

Site The site's shape is an uneven polygon with sides measuring approximately 30 by 114 by 95 by

122 meters (100 by 375 by 313 by 400 feet). It runs in a northeast to southwest direction and is **Description:**

permanently marked with concrete posts numbered H-81-1 through H-81-13. There are reportedly only two trenches at this site and they have been covered to grade with 1.8 meters (6

feet) of soil.

Waste Type: Equipment

Waste The site contains sections of contaminated 41-centimeter (16-inch) diameter pipe used as chutes **Description:**

for removal of thimbles from the 105-H Building during outages, reactor hardware, and

components from reactor modification programs.

The COCs identified through process knowledge are listed in the 100 Area Remedial Action Sampling and Analysis Plan (DOE-RL 1998) and are: cobalt-60, cesium-137, europium-152,

europium-154, strontium-90, uranium-233/234, and uranium-238.

Site Code: 118-H-4 **Classification:** Accepted

Site Names: 118-H-4, Ball 3X Burial Ground **ReClassification:**

Burial Ground Start Date: 1953 **Site Type: Site Status:** Inactive **End Date:** 1953

The site consists of one trench running north-south. Concrete markers mark the north and south Site

ends. The trench was covered to grade with approximately 1.5 meters (5 feet) of soil. **Description:**

Waste Type: Equipment

Waste The site contains thimbles, guides, and radioactive materials removed from the 100-H Reactor in

Description: 1953.

118-H-5 Site Code: Classification: Accepted

Site Names: 118-H-5, 105-H Thimble Pit **ReClassification:**

1953 **Site Type: Burial Ground Start Date: End Date: Site Status:** Inactive 1960

Site The site consists of one trench. The trench was covered to grade with soil, and marked with

Description: cement monuments.

Waste Type: Equipment

Waste The site contains a thimble assembly from the B Experimental Hole, 105-H X-level, buried in **Description:**

1953. In 1960, the 105 Pluto Crib (116-H-4) was excavated due to the construction of the 105-

H Confinement System and placed in this site.

Site Code: 126-H-1 **Classification:** Accepted

Site Names: 126-H-1, 184-H Powerhouse Ash Pit, 188-**ReClassification:** Rejected (6/25/1998)

H Ash Disposal Area

Coal Ash Pit **Site Type: Start Date:** 1948 **Site Status:** Inactive **End Date:** 1965

Site The 126-H-1 site is a large ash disposal pit and ash pile. The ash pit is approximately 76.2 meters

Description: (250 feet) long, 76.2 meters (250 feet) wide and 3.7 meters (12 feet) deep. The pit is divided into

two parts by a 2.4 meter (8 foot) berm that runs east to west. The floor of the ash pit is evenly covered with ash and cinder. Some light vegetation is evident. An ash pile is located just south of

the pit. The pile measures approximately 25 meters (82.0 feet) by 60 meters (196.9 feet).

Waste Type: Ash

Waste Unknown amounts of coal ash were sluiced to the pit with raw river water. Ash from other **Description:** Hanford ash pits has been analyzed using the EP Toxicity Test in accordance with WAC 173-

303, and no hazardous materials were found.

Site Code: 128-H-1 **Classification:** Accepted

Site Names: 128-H-1, 100-H Burning Pit, 100-H **ReClassification:**

Burning Pit No. 1

Site Type: Burn Pit **Start Date:** 1949

Inactive **End Date:** 1965 **Site Status:**

Site **Description:** The site is in a large depression or pit that appears to have been a borrow area. The western half of the site is posted with signs reading "Warning, Do Not Deposit Salvable (sic) Material." A berm runs north-south near the east end of the site. In the area surrounded by the signs, there is some scattered surface debris including: wood, glass, metal, wire, cable, and clay pipe. There are also fragments of charred material throughout this area. In the space between the area delineated by signs and the berm, visible surface debris includes scattered concrete and metal. Fragments of charred material are also found throughout this area. The majority of the surface debris is found between the berm and the eastern edge of the site. In this area, the debris includes: wood, metal, chunks of concrete, what appear to be solvent and spray paint cans, transite and large pieces of metal on wooden pallets. There are also fragments of charred material in this part of the site as well as soil gas tubes. At the eastern end of the site, debris is found on the hillside south of the depression. Also on the hillside is what appears to be an earthen ramp and a pit filled with tumbleweeds. Debris is visible through the tumbleweeds and includes cans, concrete and pails or small drums.

Waste Type: Misc. Trash and Debris

Waste The site was used for the disposal of nonradioactive, combustible materials, such as paint waste, **Description:** office waste, and chemical solvents. The burning of solvents and experimental burns have been

reported, by a past 100-H Area employee, to have taken place along the east side of the site.

Site Code: 128-H-2 **Classification:** Accepted

Site Names: 128-H-2, 100-H Burning Ground #2 **ReClassification:**

Site Type: Burn Pit **Start Date:**

Inactive 1965 **Site Status:** End Date:

Site

The site is in a depression and appears as a graded rocky area with minimal soil. There is little **Description:** surface evidence of the burn pit with the exception of rocks that appear to have been exposed to

> During the March 2000 visit, no evidence of burning was noticed but the following surface debris was observed: wood, metal cables, cans, lighting fixtures, concrete and a battery. The visible debris was scattered through the site. The site is in a depression cut into the hillside that appears to be a former borrow area. The ground surface is rough and shows evidence of heavy equipment.

Waste Type: Misc. Trash and Debris

The site received combustible materials such as vegetation, office waste, paint waste, and Waste

chemical solvents. **Description:**

Site Code: 128-H-3 **Classification:** Accepted

Site Names: 128-H-3, 100-H Burning Ground #3 **ReClassification:**

Site Type: Burn Pit **Start Date:** Site Status: Inactive End Date:

This site is a pit that resembles a trench. There is little evidence of burning with the exception

that some of the rocks are charred and show signs of exposure to fire. The pit was almost **Description:**

completely filled with tumbleweeds.

Waste Type: Ash

Waste

Description:

Site Code: 132-H-2 Classification: Accepted

Site Names: 132-H-2, 117-H Filter Building Site **ReClassification:**

Site Type:Burial GroundStart Date:1961Site Status:InactiveEnd Date:1965

Site The unit was a reinforced concrete structure, 10.7 meters (35 feet) high and 90% below grade.

Description: The maximum thickness of the walls and floors was 0.6 meter (2 feet), with the majority being 38 centimeters (15 inches) thick. The ducts were made in reinforced concrete with a maximum wall thickness of 46 centimeters (18 inches). The inlet duct was 23.2 meters (76 feet) long and the exhaust duct was 30.8 meters (101 feet) long. The structure has been demolished in-situ and the

site now resembles a gravel parking lot.

Waste Type: Demolition and Inert Waste

Waste Total radionuclide inventory in the 117-H Building is estimated to be 0.41 millicuries. The radionuclides comprising this figure are tritium, carbon-14, cobalt-60, cesium-137, strontium-90,

europium-154, europium-152, and plutonium-239/240. Of these radionuclides, strontium-90 is the most restrictive in the Allowable Residual Contamination Level (ARCL) calculations.

Site Code: 1607-H1 Classification: Accepted

Site Names: 1607-H1, 1607-H1 Septic Tank and ReClassification:

Associated Drain Field, 124-H-1, 1607-H1 Sanitary Sewer System, 1607-H1 Septic

Tank

Site Type: Septic Tank Start Date: 1948

Site Status: Active End Date:

Site The septic tank has a 50-person capacity, is constructed of concrete and measures 4.6 by 1.7 by

Description: 4.4 meter (15 by 5.5 by 14.5 feet).

The tile field is constructed of either 10-centimeter (4-inch) vitrified pipe, concrete pipe, or drain tile, 2.4 linear meters (8 feet) per capita. It measures 17.1 by 15.2 meters (56 by 50 feet) and is

oriented on a northeast-southwest line from the tank.

Waste Type: Sanitary Sewage

Waste This unit received sanitary sewage from 151-H and 105-H Buildings. The flow rate to this unit

Description: was estimated to be 503 liters/day (140 gallons/day).

Site Code: 600-151 Classification: Accepted

Site Names: 600-151, Dumping Areas 50 yards and 200 ReClassification:

yards Downstream of River Mile 14, Military installation NW of 100H Area Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site Description:

100H Area. A field investigation of the site was performed on August 13, 1996 and is the basis for the site description. A paved road enters the site from the southwest. Debris is found throughout the area and includes: a partially buried washtub, tin cans, a stove pipe, empty fuel and solvent cans painted "army green", broken concrete and transite, an old stove, wire fencing material, and a large pile of steel fence posts (screw in type for barbed wire fencing). There is evidence of ground disturbance at the site including three pits. A vertical culvert was observed at grade level extending into the ground. The culvert interior was obscured due to the presence of tumbleweeds. Several areas of stressed vegetation were also observed in the area.

The site is the debris remaining from a military installation that was located northwest of the

Waste Type: Barrels/Drums/Buckets/Cans

Waste One 208 liter (55 gallon) drum, several 19 liter (5 gallon) cans, and several 0.95 liter (1 quart)

Description: cans were noted at the site. The 19 liter (5 gallon) containers appeared to be the type that would

hold fuel such as gasoline of kerosene. Empty paint cans that contained "army green" paint are

also present.

Waste Type: Demolition and Inert Waste

Waste A large pile of broken concrete, electrical wiring, piping and pieces of wood was observed at the

Description: site.

Waste Type: Equipment

Waste A large pile of steel fence posts was observed at the site.

Description:

Waste Type: Soil

Waste Several areas of stressed vegetation were found at the site.

Description:

Site Code: 600-152 Classification: Accepted

Site Names: 600-152, Military Septic Tanks **ReClassification:**

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site is one or more septic tanks left from a military camp that was once located in the area.

Description: Three separate inline concrete covers and two manholes identify the site.

As a result of sampling results, the site was posted with "Underground Radioactive Material"

signs.

Waste Type: Sanitary Sewage

Waste The tanks remain in place and may contain remnants of septage. The contents are labeled **Description:** 'radioactive' here because sampling showed gross beta at 72 pCi/liter (see field work discussion

for comparisons with Hanford Site background). The site was posted with "Underground

Radioactive Material" signs.

Site Code: 600-258 Classification: Rejected (5/31/2001)

Site Names: 600-258, RCRA General Inspection **ReClassification:**

Summary Sheet HIRIVFY99, Item #1

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is surface debris from pre-Hanford activities. It is on the riverbank, facing the White

Description: Bluffs, and is covered with vegetation matching the surrounding terrain.

The debris on the ground is mostly old metal wire used to wrap wooden irrigation pipes. It appears to have been pushed over the edge as a way to clean up the fields. A small concrete structure is at the northern edge of the site. The structure appears to have been filled in with dirt, although the dirt could have been piled on top of the cover, posing a cave-in hazard. The debris is

very scattered over the length of the site

Waste Type: Misc. Trash and Debris

Waste The material consists of rusted metal wire used to wrap wooden irrigation pipes, old bedsprings,

Description: food cans, a small concrete box (filled in with soil), and a little broken glass.

100-IU-1

600-41 **Classification: Site Code:** Accepted

600-41, H 70 Anti-Aircraft Artillery (AAA) **ReClassification:** Rejected (4/11/2002) **Site Names:**

Military Compound **Start Date:** 1951 **Site Type:** Inactive **Site Status: End Date:** 1963

The unit is an abandoned Military Installation (H 70) consisting of a few covered foundations and Site cleared areas. Some man-made mounds were present. There is a paved road and a few trees at the **Description:**

During the April 16 and April 19, 1999, visits, two earthen mounds were observed as well as the remains of several foundations. The site is overgrown with approximately 0.9 meter (3 foot) tall sagebrush, making it difficult to discern either features or the edges of the site. There are several opens areas covered with cheatgrass. Some metal, concrete, glass and transite were observed scattered around the site. A burn pit/dump was found. Some burned wood was observed on the surface but primarily glass and transite were visible. A burrow going into the center of the dump shows buried glass.

Site Code: 600-42 **Classification:** Accepted

Site Names: 600-42, H 71 Anti-Aircraft Artillery (AAA) ReClassification: Rejected (4/11/2002)

Site

Site Type: Military Compound **Start Date:** 1951 1963 **Site Status:** Inactive **End Date:**

Site

The site is an abandoned military installation. The structures have been removed. The site is accessed by a northeast trending primitive road that runs through it. Berms run along the south **Description:** side of this road and the remains of barbed wire fences can be found on either side. Well 699-68-105 is found near the northern edge of the site. The marker for this well is a good landmark.

Most of the evidence of the site is found on the north side of the road.

During the April 16, 1999, visit, evidence of a small tile field was found. It appeared as though the septic tank associated with the tile field has been removed or has collapsed. A pit that could have housed a second septic tank was found on the south side of the road that runs through the site. No evidence of a second tile field was found. A concrete walkway and a rock walkway were found. Wood debris, glass and concrete chunks were found, as well as a metal lid stamped "120 MM GUN" and "CONT M79A." An approximately 1.2 meter (4 foot) by 2.4 meter (8 foot) underground bunker was discovered. Its wooden roof is collapsing and presents a physical hazard. The depth of the bunker could not be estimated. Numerous areas with little or no vegetation were also observed around the site. Evidence of an old orchard can be found north of the site. The orchard can be seen in photo # 02646. Within the old orchard is an earthen mound with vegetation growing on its sides but not on its crown.

600-43 Site Code: **Classification:** Accepted

ReClassification: Rejected (4/11/2002) **Site Names:** 600-43, McGee Fish Farm

Start Date: Site Type: Dumping Area Site Status: Inactive **End Date:**

Site The unit is an abandoned commercial fish farm. The fish ponds have been backfilled and

Description: revegetated. A site visit in 1999 found a moderate amount of miscellaneous debris, wire and

automobile parts strewn around the area near where the fish tanks had been located.

Waste Type: Misc. Trash and Debris

Waste The unit waste includes broken plastic pipe, plastic sheeting, wood, metal, glass debris and an

Description: abandoned vehicle.

Site Code: 600-44 Classification: Accepted

Site Names: 600-44, Herbicide/Pesticide Empty ReClassification: Deleted From NPL (7/8/1998)

Container Pile, Enyert Well Empty Pesticide Container Dump, 600-68

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site During the Riverland Expedited Response Action, a visual inspection of the area found a pile of **Description:** empty herbicide/pesticide containers lying on the surface. The containers were rusty five gallon

empty herbicide/pesticide containers lying on the surface. The containers were rusty five gallon and one gallon cans covering an area of approximately 130 square feet. The condition of the

containers suggested that they were placed there well after Hanford operations began.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The site waste includes empty pesticide and herbicide containers, and debris piles from the

Description: homestead.

Site Code: 600-45 Classification: Accepted

Site Names: 600-45, Transite and Metal Debris Pile ReClassification: Rejected (4/11/2002)

Site Type:Dumping AreaStart Date:1951Site Status:InactiveEnd Date:1964

Site The site is not marked or posted. The unit consisted of piles of debris scattered on the ground

Description: surface. The unit covered approximately 500 square meters that ended at a cliff. The material has

been removed.

Waste Type: Misc. Trash and Debris

Waste The unit waste includes broken transite shingles, pallet banding straps, exhaust stack made from

Description: drums, miscellaneous military food cans and a couple of drums that were rolled off the cliff.

Site Code: 600-101 Classification: Accepted

Site Names: 600-101, RRCWP, Riverland Railroad Car ReClassification: Deleted From NPL (7/8/1998)

Wash Pit

Site Type:Depression/Pit (nonspecific)Start Date:1945Site Status:InactiveEnd Date:1963

Site During the Expedited Response Action cleanup activities, the site resembled a concrete trench.

Description: Excavations were done to uncover the pits for sampling. The rail road car cleaning pits were

about 1 meter (3 feet) deep and 2 meters (6 feet) wide. Following remediation activities, the pits

were backfilled to grade and revegetated.

Waste Type: Water

Waste The site was used as a steam cleaning and low-level decontamination station for locomotive

Description: engines and cars used at Hanford.

Site Code: 600-102 Classification: Accepted

Site Names: 600-102, 600 AMBS, 600 Area Army ReClassification: Deleted From NPL (7/8/1998)

Munitions Burial Site

Site Type:Burial GroundStart Date:1971Site Status:InactiveEnd Date:1976

Site The site consisted of a shallow excavation that contained a wooden box of explosives used during

Description: the 1970's for military exercises. The explosives were removed in 1986. The excavation was

backfilled in 1993.

Waste Type: Ordnance

Waste The unit received military explosives as follows: 6 gun blast simulators, Model 110, dated **Description:** October 1953; 78 boxes (packed 5 to a box) of fuse ignitors; Model M60, Lot KYC-1, dated

May 1960; one trip flare, Model M49; one can containing 50 nonelectrical blasting caps, marked

"ARMY"; 43 electrical blasting caps; ~500 ft of time fuse; ~200 ft of detonating cord; and

remnants of one grenade or artillery simulator.

Site Code: 600-140 Classification: Rejected (1/27/1998)

Site Names: 600-140, Gunny Sacks south of H-70 **ReClassification:**

Antiaircraft Site

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is partially buried empty gunny sacks that appear to have been abandoned. The site was

Description: found on 01/11/95 during the Riverland field investigation.

Waste Type: Misc. Trash and Debris

Waste The sacks were constructed of natural fibers.

Description:

Site Code: 600-141 Classification: Rejected (1/27/1998)

Site Names: 600-141, Barrels South of H-70 Antiaircraft **ReClassification:**

Site

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is two empty containers. One container is an empty 113 liter (30 gallon) drum painted army green and yellow. The other appears to be an empty garbage can. Both containers are partially buried. No labels or markings were visible on the containers that would identify what they were used for.

Waste Type: Barrels/Drums/Buckets/Cans

Waste An empty steel drum and a garbage can were found at the site.

Description:

Site Code: 600-142 Classification: Accepted

Site Names: 600-142, Car Body at McGee Ranch Fish ReClassification: Rejected (2/9/1998)

Farm

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

End Buttl

Site The site is an abandoned automobile. The car is resting upside down on its roof and has been **Description:** partially crushed. The engine, transmission, differential, and radiator remain in the car. No

battery was found, the radiator appeared empty and no visible leaks of automotive fluids were

observed.

Waste Type: Equipment

Waste The auto body is constructed of sheet metal and a steel frame.

Description:

Waste Type: Oil

Waste The engine, transmission, and differential may contain oil or oil residue.

Description:

Site Code: 600-143 Classification: Rejected (1/27/1998)

Site Names: 600-143, Car body at Ford Well ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a car body only. The engine, transmission, radiator, and battery have been removed.

Description: Several bullet holes were observed in the car body.

Waste Type: Equipment

Waste The car body is constructed of sheet metal and a steel frame.

Description:

Site Code: 600-144 Classification: Rejected (1/27/1998)

Site Names: 600-144, Car Body near top of Umptanum **ReClassification:**

Ridge

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site

The site is a car body only. The engine, transmission, radiator and battery have been removed.

Description: Several bullet holes were observed in the car.

Waste Type: Equipment

Waste

The car body is constructed of sheet metal and a steel frame.

Description:

Classification: Site Code: 600-273 Discovery

600-273, Pile of Red Material at Riverland **ReClassification: Site Names:**

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

Site

The site is a pile of red material about 1.4 meters (4.5 feet) high, 9 meters (30 feet) long, and 5

Description: meters (15 feet) wide. The volume calculated by GPS is 113 cubic meters.

> The site is near the end of a long berm headed west from the old railroad maintenance yard at Riverlands. Patches of similar colored soil can be seen throughout the area. No vegetation is growing in the upper half of the pile, but cheatgrass and other weeds have established at the bottom, presumably where their roots can reach soil. A magnet will pick up some of the fine particles in the pile, suggesting that the material is a crushed iron ore.

Waste Type: Soil

Waste **Description:** The pile appears to be a pile of iron ore dumped from a hopper car so the car could be worked on at the maintenance facility. Iron ore was used in making the concrete for reactors since it

provided additional shielding.

Site Code: 600-274 Classification: Accepted

Site Names: 600-274, 2,4-D Can Site at McGee Ranch, **ReClassification:** Deleted From NPL (7/8/1998)

Riverland

Site Type: Dumping Area Start Date:

End Date: 1994 **Site Status:** Inactive

Site The 2,4-D can site is surrounded by old-growth sagebrush with a cheatgrass understory. As it is **Description:** near the far western border of the Hanford Site, there are no Hanford facilities nearby. Eleven 5gallon cans were found here, nine of which were buried upright and adjacent to each other, with

only their tops showing. Two other cans were on top of the ground nearby. The cans were removed and the soil sampled in 1994 as part of the closeout of the 100-IU-1 Operable Unit.

In addition, while the original site was being located with the GPS coordinates in 2001, three other 5-gallon cans were found due north of the site about 100 meters (100 yards), also in sagebrush. This site was also GPS'd and flagged with white tape. All cans have been removed.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The site was 11 old herbicide cans (2,4-D) that had some soil and liquid (in one can) remaining. **Description:**

100-IU-2

Site Code: 600-5 Classification: Accepted

Site Names: 600-5, White Bluffs Waste Oil Dump, **ReClassification:**

Asphalt Heliport

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of a circular asphalt or heavy oil area 4.6 meters (15 feet) in diameter, and an **Description:** asphalt or heavy oil ditch 7.6 meters (25 feet) long, 38 centimeters (15 inches) wide and 2.5

centimeters (1 inch) deep near and to the southwest. Also located at the site is a metal flag about 46 centimeters (18 inches) long fastened to a 1.3-centimeter (1/2-inch) steel pipe. A 10-centimeter (4-inch) diameter pipe is stuck end wise in the center of the pad and flush with the surface. The surrounding area has many homestead type dumps. The asphalt or heavy oil material which makes up the pad and ditch does not appear to contain gravel, making its

appearance different than that of typical roadway type asphalt surfaces. It is unknown whether the pad and ditch were planned construction or the result of the dumping of a heavy oil type

substance; however, they appear to have been planned.

Waste Type: Oil

Waste The site contains an asphalt or a heavy oil type substance.

Description:

Site Code: 600-52 Classification: Accepted

Site Names: 600-52, White Bluffs Surface Basin **ReClassification:**

Site Type:Drain/Tile FieldStart Date:Site Status:InactiveEnd Date:

Description:

The site is a depression. A pile of dead trees lie near the center of the depression. Some concrete and rebar demolition debris is located on the north side of the site along the powerline road. Some wood demolition debris was also found within the depression area. The depression is ellipse-shaped with its major axis running northeast and southwest. A trench running northeast was separated from this site by a utility road. It is unknown if the trench is related to this waste site. The trench seems to terminate near septic tanks for the Ice House. Potentially, the depression was used as a surface drain field.

During the May 1999 visit, it was observed that the trench continues south of the powerline road to the edge of the site.

Waste Type: Process Effluent

Waste Nitric and hyrdofluoric acids were discharged to the nearby Pickling Acid cribs. Sampling **Description:** indicated slightly elevated levels of chrome and chloride when compared to background

indicated slightly elevated levels of chrome and chloride when compared to background samples. Generally, the acid was neutralized prior to disposal, but may not have been

completely neutralized prior to disposal.

Site Code: 600-98 Classification: Accepted

Site Names: 600-98, East White Bluffs City Landfills, **ReClassification:**

East White Bluffs Dump and East White

Bluffs Dump #2, East White Bluffs

Landfill, EWBCL

Site Type:Sanitary LandfillStart Date:1850Site Status:InactiveEnd Date:1943

Site Description:

This site is two unlined, pre-Hanford landfills. The East White Bluffs City Landfill is located about 30.5 meters (100 feet) west of the White Bluffs Ferry Landing. It is two separate areas. Dump #1 is near the river. A small amount of scattered surface debris (cans, glass and wood) is still visible at dump #1. Dump #2 is located west of Dump #1. It is an area of gravel ridges and surface scars. The Technical Baseline Report states this area was a dumping area covered with a bulldozer. This landfill operated from 1850 to 1943.

The East White Bluffs Dump #2 operated form 1900 to 1943. It is divided by a dirt roadway, but is mostly located between the roadway and the Columbia River. The site has been fully backfilled with clean fill material and is covered by natural vegetation. Debris, including pots, bowls, glass, wood, cables and plywood, can be found around the site. In a May 1948 aerial photograph (United States Geological Survey [USGS]) of the site, it appears to be flooded with water as a result of historic flood of the Columbia River that year.

Waste Type: Misc. Trash and Debris

Waste Description:

Both sites were used to dispose of industrial and domestic wastes common to the time that it was being used. Surface debris found around the East White Bluffs Dump included cans, glass and wood. Surface debris found the East White Bluffs Dump #2 included wood, metallic, domestic (pots, bowls, and glassware), and industrial debris (cables and plywood sheets). The sites contain no known radioactive constituents.

Site Code: 600-99 Classification: Accepted

Site Names: 600-99, JA Jones 2, J. A. Jones #2, JA ReClassification: No Action (9/12/2003)

JONES2

Site Type:Burial GroundStart Date:1948Site Status:InactiveEnd Date:1955

Site The site has been reclassified and does not require remediation.

Description:

Waste Type: Construction Debris

Waste This site contained minor construction equipment used by the J. A. Jones Construction

Description: Company, including wood scraps, concrete, and some metallic waste. However, the excavation

records indicate that the site contents were removed to the 200 Areas Burial Grounds in 1971

because of radioactive contamination in the landfill.

Site Code: 600-100 Classification: Accepted

Site Names: 600-100, White Bluffs Landfill, White **ReClassification:**

Bluffs City Landfill, WBL, White Bluffs

City Dump, 600-119

Site Type:Sanitary LandfillStart Date:1850Site Status:InactiveEnd Date:1943

Site The site is an unlined excavation that received industrial, commercial, domestic and farm wastes.

Description:

Waste Type: Misc. Trash and Debris

Waste The site was used for normal commercial and domestic wastes at the time. It contains no known

Description: radioactive constituents. Per BHI-00049, the site was used for disposal of industrial,

commercial, and domestic wastes, cans, bottles, and farm debris.

Site Code: 600-120 Classification: Accepted

Site Names: 600-120, White Bluffs Spare Parts Burn **ReClassification:**

Pit, Spare Parts Burn Pit

Site Type:Burn PitStart Date:1943Site Status:InactiveEnd Date:1948

Site The site is a burn pit that was used for industrial and commercial wastes. The site appears to have

Description: been backfilled with coal ash.

Waste Type: Chemicals

Waste The waste was solvents, waste oils, and flammable wastes. The site may have been used to **Description:** dispose of other solid wastes. The site appears to have been backfilled with coal ash.

Site Code: 600-121 Classification: Accepted

Site Names: 600-121, White Bluffs Coal Ash Piles, Coal ReClassification: Rejected (10/6/1997)

Ash Piles

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is several small coal ash piles located just east of the Pickling Acid Cribs.

Description:

Waste Type: Ash

Waste The waste is coal ash that has been placed in piles (discernible units).

Description:

Site Code: 600-122 Classification: Rejected (10/6/1997)

Site Names: 600-122, White Bluffs Large Fenced **ReClassification:**

Depression

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The eastern boundary of the site once was a power distribution line and powerline road. Power

Description: poles were removed by cutting them off just above the ground surface. Glass insulator material litters the area. Just west of this powerline is the fencing that surrounds the site. The fence is

wood post and wire enclosure that appears to have been installed to keep deer out of the area.

The fence is in very poor condition.

Site Code: 600-123 Classification: Rejected (10/6/1997)

Site Names: 600-123, White Bluffs Farm Site, Farm Site **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site was a farm site. One source indicates that it may have been occupied by the army for a **Description:** period of time indicates the site is littered with waste debris, including battery cores, broken glass

period of time indicates the site is littered with waste debris, including battery cores, broken glass, concrete, cans, bottles, wire, machinery parts, and other domestic wastes (Carpenter, 1994). A site visit done on August 16, 1996 did not find any battery cores or evidence of military debris. Two of the building foundations are deep and open to the surface. One of these is filled with concrete rubble, piping and debris. There is one concrete slab that could be a building foundation and one small concrete structure that is approximately 1.2 meters (4 feet) by 0.9 meters (3 feet) and is approximately 0.9 meters (3 feet deep).

Waste Type: Misc. Trash and Debris

Waste The waste is farm debris, including sheep fencing, irrigation and other farming equipment, scattered household debris, and foundations for buildings. No evidence of army occupation

remains. There is no evidence of any hazardous materials, and is a residential, not industrial site.

Site Code: 600-124 Classification: Accepted

Site Names: 600-124, White Bluffs Burn Site and Paint **ReClassification:**

Disposal Area, Burn Site and Paint

Disposal Area

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a burn area where there is evidence of surface burning and paint disposal. The entire area is littered with burned wood, partly burned roofing materials, glass, nails, metallic debris, transite and isolated paint cans. There is evidence of surface disposal of paint materials in dried paint chips and deposits. There is also a large area with decaying timbers laying in many parallel rows. It appears to be some type of floor structure.

Waste Type: Chemicals

Waste The waste is the remains from paint disposal.

Description:

Site Code: 600-125 Classification: Accepted

Site Names: 600-125, White Bluffs Waste Disposal **ReClassification:**

Trench 1, Waste Disposal Trenches

Site Type:TrenchStart Date:Site Status:InactiveEnd Date:

Site The site currently looks like a sandy depression with wood, ceramic and metal debris on the

Description: surface.

Waste Type: Misc. Trash and Debris

Waste Description:

The waste includes metal shavings, steel piping, plumbing fixtures, paint cans and automotive parts; as well as other metallic and wooden debris. In the same area there are several piles of used railroad ties, broken vitrified clay pipe, concrete pipe, 30.5-centimeter (12-inch) diameter, 6.1-meter (20-foot) long spiral welded pipe, plumbing fixtures, and degraded asbestos insulation.

Site Code: 600-126 Classification: Rejected (10/6/1997)

Site Names: 600-126, White Bluffs Small Subsidence, **ReClassification:**

Small Subsidence

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The site is a subsurface concrete structure that appears to be about 1.2 meters (4 feet) across. Soil

Description: around the structure has subsided into its underground void space. A few feet behind is a vertical

pipe that opens into the void beneath the structure.

Waste Type: Construction Debris

Waste Concrete

Description:

Site Code: 600-127 Classification: Accepted

Site Names: 600-127, White Bluffs Loading Docks and **ReClassification:**

Fuel Storage Area, Fuel Storage Area

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Description:

Site

The site is two loading docks and a rectangular area surrounded by a low soil berm 0.5 meters (1.6 feet) high. The ground within the berm is covered by a layer of coal ash. Inside the bermed area are several wooden beams, the tops of which are flush with the ground surface. On the top of these beams are wooden shims placed so as to suggest that they once supported large round horizontal tanks associated with fuel storage. It appears that there were four or five of these large tanks located at the site. Other small debris piles are located nearby that consist of broken vitrified clay piping, plumbing fixtures, and concrete piping. On the north side just outside the berm, there appears to have been a smaller fuel tank site. The two loading docks located adjacent to the fuel storage area are described as the north loading dock and a south loading dock. Each loading dock was approximately 20 meters (66 feet) long by 12 meters (39 feet) wide. These two loading docks appear to have been a convenient location to offload heavy equipment.

Waste Type: Oil

Waste The waste is petroleum product contaminated soil.

Description:

Site Code: 600-128 Classification: Accepted

Site Names: 600-128, White Bluffs Oil and Oil Filter ReClassification: Interim Closed Out (9/16/2003)

Dump Site, Oil and Oil Filter Dump Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site

The site has been remediated and closed out.

Description:

The site had been an oil dump area that included several canister-type oil filters. Surface debris

was removed in the spring of 2003.

Waste Type: Oil

Waste The waste is oil contaminated soil, oil cans and filters. There are also several small areas with

Description: broken glass, cans, and other metal debris.

Site Code: 600-129 Classification: Accepted

Site Names: 600-129, White Bluffs Pre-MED **ReClassification:**

Community Dump Site 1, Pre-MED White Bluffs Community Dump Site (Oil Can Site)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is in a large depression. The site is littered with domestic and industrial debris.

Description: Industrial wastes were found at the southern edge of the site. It appears that the entire area was

also used as a burning pit for the disposal of flammable wastes. Evidence of burning abounds

throughout the site.

During the April 1999 visit, some areas of localized burning were observed. The ground cover is

primarily grasses and mature sagebrush.

Waste Type: Misc. Trash and Debris

Waste Description:

The main part of the site is littered with cans, bottles, oil cans, glass, wire, rope, toys, and automotive bodies and parts. On the southern edge industrial wastes include insulators, fuse boxes, conduit, and six 208-liter (55-gallon) drums, one of which is labeled "Carbon Tet". Because of the large number of oil cans, it is believed that the site was used by both Manhattan Engineering District (MED) and White Bluffs residents for the disposal of domestic type waste (Carpenter, 1994). Three glass vials containing an unknown white powder were found on a site

walkdown in 1999. Dry cell batteries were also observed on April 22, 1999.

Site Code: 600-130 Classification: Rejected (10/6/1997)

Site Names: 600-130, American Pipe Company ReClassification:

Facilities, Stephensen's Cement Pipe

Factory

Site Type:Fabrication ShopStart Date:Site Status:InactiveEnd Date:

Site The site consists of remnants of the following facilities: valve box and 2 inch water line, concrete **Description:** foundation, warehouse foundation, concrete sump attached to warehouse foundation, debris pile,

foundation, potential smokestack base, and small subsidences that appear to be rotted wooden poles. The area is littered with wood, metal parts, glass, burned building materials, and debris.

Waste Type: Misc. Trash and Debris

Waste The waste is miscellaneous trash and debris consisting of wood, metal parts, glass, burned

Description: building materials, and debris.

Site Code: 600-131 Classification: Accepted

Site Names: 600-131, White Bluffs Water Station and ReClassification: Interim Closed Out (9/12/2003)

Special Fabrication Shops and Warehouse, Special Fabrication Shop and Warehouse

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site included the remnants of the Special Fabrication Shop and Warehouse, boiler house,

warehouse, loading dock/well and a water station.

Waste Type: Misc. Trash and Debris

Waste The waste was miscellaneous trash and debris, including concrete, transite, asphalt shingles, **Description:** glass, and metallic debris. Transite contains asbestos, which was a hazardous substance.

Asbestos was a CERCLA hazardous substance that may require action to mitigate a potential environmental impact. Asbestos wastes are excluded from the Dangerous Waste Regulations

(WAC 173-303-071).

Site Code: 600-132 Classification: Accepted

Site Names: 600-132, White Bluffs Construction ReClassification: Interim Closed Out (9/12/2003)

Contractor Shop Landfill, Construction

Contractor Shop Landfill

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was a large open borrow pit. The floor was mostly gravel and cobble with rabbitbrush and grasses. It contained scattered debris, such as broken concrete and pieces of metal, similar to

the surrounding area. Surface debris was removed in 2003.

Waste Type: Misc. Trash and Debris

Waste If this site was actually the Construction Contractor Shop Landfill and not a borrow pit, the **Description:** wastes that may have been disposed there could include oils, solvents, and cleaning agents (for

example, carbon tetrachloride), typical of shop wastes. There may also be radioactive wastes, if this was not a mis-identified site (also see site 600-99). Carpenter (1995) identified two locations along the northwest boundary of the site with spots of oil (1.5-meter [4.9-foot]

diameter for both spots).

The waste that was visible in 1999 was surface debris, common to the entire 100-IU-2 Operable Unit, such as rusted metal cans, concrete rubble, a few pieces of transite, and wire. Two small piles of aluminum shavings are at the site, one on the floor of the pit and one at ground level, near the first pile. A small mound of dirt on the southwest corner, at the surrounding surface elevation, has partially buried pieces of yellow bricks and thick metal. A field walkdown done

in April 2003 determined the site was a gravel borrow area and not a landfill.

600-135 **Site Code: Classification:** Accepted

Site Names: 600-135, White Bluffs Spare Parts Machine **ReClassification:** Rejected (1/26/1998)

Shop Landfill and Pit, Spare Parts Machine

Shop Landfill, Horseshoe Pit

Burial Ground Site Type: Start Date: Site Status: Inactive **End Date:**

Site This unit includes two potential waste sites. One site is called the Spare Parts Machine Shop

Description: Landfill, also known as the horseshoe pit. It was once a borrow pit that was later used as a waste disposal site. The borrow pit was dug in a semicircle to the northeast of nearby warehouses

(hence the name horseshoe pit). The site appears to have been backfilled over about one-half to two-thirds of its area. The second site is a pit oriented in the east-west direction located directly west of Spare Parts Machine Shop Landfill. This pit measures about 90 meters (300 feet) long by

40 meters (130 feet) wide. No documentation could be found to indicate the purpose of the pit.

Waste Type: Equipment

Equipment parts and pieces are scattered about the area. Waste

Description:

Asbestos (non-friable) Waste Type:

The entire area was covered with scattered transite siding. Waste

Description:

Site Code: 600-136 **Classification:** Rejected (10/6/1997)

Site Names: 600-136, White Bluffs Insulation **ReClassification:**

Warehouses, Insulation Warehouses

Site Type: Start Date: Storage

Site Status: End Date: Inactive

Site

The site is a warehouse area within the White Bluffs townsite. It is covered with cheatgrass with **Description:** some rabbitbrush and tumbleweed growth. There is very little evidence of the former warehouse

buildings except for a few pieces of wood. Pavement from the former Lincoln St. shown in the referenced documents is still visible south of the site and aided identifying the precise location in

the field. There was no evidence of asbestos at the site.

600-138 **Site Code: Classification:** Rejected (10/6/1997)

Site Names: 600-138, White Bluffs Fumigation ReClassification:

Building, Fumigation Chamber Building Maintenance Shop Site Type: **Start Date:**

Site Status: Inactive **End Date:**

The site is the remains of a fumigation building. A field investigation was performed by T. F. Site

Johnson on October 15, 1996. The terrain was flat with gravel surface soil and had cheatgrass **Description:** and rabbitbrush vegetation. Very little evidence of the fumigation building remained at the site.

A few pieces of wood and concrete were observed in the area. A standing wooden post remained

near the site which may have been part of the fence surrounding the building.

Site Code: 600-139 Classification: Accepted

Site Names: 600-139, White Bluffs Automotive Repair ReClassification: Interim Closed Out (9/12/2003)

Shop and Associated Waste Sites,

Automotive Repair Shop

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site was an area thought to be associated with an automotive repair shop. Surface debris included numerous battery caps, engine gaskets, dumped waste oils, and fragments of tail light

lenses. The surface debris was removed in May 2003.

Waste Type: Oil

Waste The waste included battery caps, engine gaskets, fragments of tail light lenses, and dumped

Description: waste oils.

Site Code: 600-157 Classification: Rejected (10/6/1997)

Site Names: 600-157, White Bluffs Concrete ReClassification:

Foundation Pads

Site Type:FoundationStart Date:Site Status:InactiveEnd Date:

Site The site is described as several concrete foundation pads. Some of these pads have tie-down

Description: straps. Apparently these pads were used to support wooden warehouse buildings. The buildings

were probably intentionally destroyed by fire, as the ground surface is littered with charred wood,

burned electrical equipment (lights, switches, conduit, etc.), and nails.

Waste Type: Misc. Trash and Debris

Waste The waste is concrete pads and miscellaneous burned debris (electrical equipment, e.g., lights,

Description: switches, conduit, etc. and nails).

Site Code: 600-158 Classification: Rejected (10/6/1997)

Site Names: 600-158, White Bluffs Ground Storage **ReClassification:**

Tank and Booster Pump Station

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site There is an area of reduced vegetation that is a vague circular shape that could where a storage

Description: tank once sat. No evidence of a pumping station was found.

Site Code: 600-159 Classification: Rejected (10/6/1997)

Site Names: 600-159, White Bluffs Bank Well **ReClassification:**

Site Type: Pump Station Start Date:

Site Status: Inactive End Date:

Site The well had been a concrete structure covered with a steel plate and was surrounded by a light-Description: duty steel post and orange barricade material. The well has been backfilled with grout and

marked with a metal disk that reads "Well No. A8991, 699-80-39B, Abandoned 9-26-95."

Site Code: 600-160 Classification: Rejected (10/6/1997)

Site Names: 600-160, White Bluffs Irrigation Debris **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

The site is an area containing concrete irrigation pipe sections. The piping sections are large in

Description: diameter and not very long. The site consists of a pipe standing within a large-diameter pipe.

Other debris is scattered across the nearby area.

Waste Type: Misc. Trash and Debris

Waste The waste is concrete irrigation piping.

Description:

Site Code: 600-161 Classification: Rejected (10/6/1997)

Site Names: 600-161, White Bluffs Plumbing Debris **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of two piles of plumbing debris. One pile contains ceramic plumbing fixtures

Description: and the other pile contains cast iron plumbing fixtures.

Waste Type: Misc. Trash and Debris

Waste The waste is ceramic urinals, sinks, plumbing fixtures and cast iron piping fixtures.

Description:

Site Code: 600-162 Classification: Rejected (10/6/1997)

Site Names: 600-162, White Bluffs Pipe Debris and **ReClassification:**

Bucket of Lead

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site There had been two debris remnants, one consisting of two 8 inch steel pipe sections embedded in

Description: concrete and the second is a bucket of what appeared to be lead. The bucket of lead was

removed in 1995.

Waste Type: Misc. Trash and Debris

Waste The remaining waste is two 8 inch sections of pipe encased in concrete.

Description:

600-163 **Classification:** Rejected (10/6/1997) **Site Code:**

600-163, White Bluffs Pipe Testing Shop **ReClassification: Site Names:**

Start Date: Site Type: Laboratory **Site Status:** Inactive **End Date:**

Site The vague outline of a building footprint was identified at this location.

Description:

600-164 Rejected (10/6/1997) **Site Code: Classification:**

600-164, White Bluffs Earth Berm and **ReClassification: Site Names:**

Trench

Site Type: Trench **Start Date: Site Status:** Inactive **End Date:**

The earth berm appeared to have been some of the material removed from the trench excavation. Site

Description:

Site Code: 600-165 **Classification:** Rejected (10/6/1997)

Site Names: 600-165, White Bluffs Valve Box **ReClassification:**

Start Date: Site Type: Valve Pit **Site Status:** Inactive **End Date:**

The site is a subsidence of about one square meter and is lined with concrete, suggesting a valve Site

box or drain system. The subsidence indicates a subsurface structure with a void space that **Description:**

allows overburden to subside into it because of storm runoff. There is a section of power pole

laying across the top of the structure.

Site Code: 600-166 **Classification:** Rejected (10/6/1997)

Site Names: 600-166, White Bluffs Subsidences **ReClassification:**

Site Type: Depression/Pit (nonspecific) **Start Date: Site Status:** Inactive **End Date:**

Site The site is a series of subsidences. A single subsidence measuring approximately four meters (13 feet) in size was originally identified in the White Bluffs Technical Baseline Report. The author **Description:**

of the report suggested that the site may be a subsurface structure with a void space that allowed overburden materials to be washed into it by rain runoff. A RARA Walkdown visit in May 1999 identified three additional, similar subsidences, two of which are in line with the original one. The subsidences found in 1999 measured approximately 1.83 meters (6 feet) across and 0.9

meters (3 feet) deep.

Site Code: 600-167 Classification: Rejected (10/6/1997)

600-167, White Bluffs Cistern **Site Names: ReClassification:**

Site Type: Catch Tank **Start Date: Site Status:** Inactive **End Date:**

Site **Description:** The site is a large Pre-Manhattan Engineering District concrete cistern. The top of the concrete cistern structure is located slightly below grade level. The hole is almost filled with windblown tumbleweeds. A small portion of the concrete structure was visible on a 1999 site visit.

600-170 **Site Code: Classification:** Rejected (10/6/1997)

Site Names: 600-170, White Bluffs Subsurface Concrete ReClassification:

Structure

Start Date: Site Type: Sump Site Status: Inactive End Date:

Site The site is a series of subsurface concrete structures. The White Bluffs Technical Baseline Report

originally described a single subsurface concrete structure, possibly a sump. A RARA Walkdown **Description:**

visit in May 1999 found four additional similar concrete structures/subsidences surrounding an

old building foot print.

600-171 **Site Code: Classification:** Rejected (10/6/1997)

600-171, White Bluffs Townsite **ReClassification: Site Names:**

Office **Start Date: Site Type: Site Status: End Date:** Inactive

Site The site is the White Bluffs Townsite located in the proximity of the intersection of Route 2 North

and Federal Avenue. Most of the buildings have been demolished except for the White Bluffs **Description:**

Bank.

SubSites:

SubSite Code: 600-171:1

600-171:1, White Bluffs Townsite Wells SubSite Name:

Classification: Rejected

ReClassification:

Description: Well Site Number 24 was located north of Federal Avenue and west of Third Avenue. A new

> well has been constructed within the remains of an older well. The new well is labeled 699-81-38, A5337, and appears to be in use. Another well was located almost due south of the intersection of Federal Avenue and Railroad Avenue, and north of Commercial Avenue. A third well was located at the northeast end of Federal Avenue. This third well appears to have been decommissioned. It has been filled with grout and is marked with a metal disk that reads "Well No. 699-83-36, Abandoned 9-21-95." A fourth well was located near the north end of

Fifth Avenue by Building 20, MS-9 Warehouse.

SubSite Code: 600-171:2

SubSite Name: 600-171:2, White Bluffs Townsite Insulation Warehouse, Site Number 32

Classification: Rejected

ReClassification:

Description: This site was located at the northeast corner of Railroad Avenue and Lincoln Avenue. This

site is the same as 600-136 and should not have been included as a subsite. Only those sites

that did not have their own individual sitecodes should have been included in 600-171.

SubSite Code: 600-171:3

SubSite Name: 600-171:3, White Bluffs Townsite, Office Equipment Warehouses, Site Number 33

Classification: Rejected

ReClassification:

Description: There are six warehouses altogether. Three of the warehouses were located on the south side

of Federal Avenue between First and Second Avenues. Another one was located on the northeast corner of First Avenue and Federal Avenue. One of the warehouses was located on the west side of First Avenue, half way between Federal Avenue and Lincoln Avenue. The

sixth was located at the northeast corner of First Avenue and Lincoln Avenue.

SubSite Code: 600-171:4

SubSite Name: 600-171:4, White Bluffs Townsite Elevated Water Storage Tank, Site Number 34

Classification: Rejected

ReClassification:

Description: The site was located at the northwest corner of Second Avenue and Lincoln Avenue.

SubSite Code: 600-171:5

SubSite Name: 600-171:5, White Bluffs Townsite Air and Welding Tool Maintenance Building, Site Number

36

Classification: Rejected

ReClassification:

Description: The site was located on the east side of Railroad Avenue and half way between Federal

Avenue and Lincoln Avenue.

SubSite Code: 600-171:6

SubSite Name: 600-171:6, White Bluffs Townsite Fire Station, Site Number 37

Classification: Rejected

ReClassification:

Description: The site was located at the northwest corner of First Avenue and Federal Avenue.

SubSite Code: 600-171:7

SubSite Name: 600-171:7, White Bluffs Townsite Service Division Engineer Office, Site Number 38

Classification: Rejected

ReClassification:

Description: The site was located north of Federal Avenue between Second Avenue and Third Avenue.

SubSite Code: 600-171:8

SubSite Name: 600-171:8, White Bluffs Townsite Government Checkers and Ration Office, Site Number 39

Classification: Rejected

ReClassification:

Description: The site was located just east of the White Bluffs Townsite Service Division Engineer Office,

Site Number 38.

SubSite Code: 600-171:9

SubSite Name: 600-171:9, White Bluffs Townsite Two Stationary Storage Warehouses, Site Number 42

Classification: Rejected

ReClassification:

Description: Both sites were located south of Federal Avenue and East of Railroad Avenue.

SubSite Code: 600-171:10

SubSite Name: 600-171:10, White Bluffs Townsite Fire Inspection Office, Site Number 43

Classification: Rejected

ReClassification:

Description: The site was located near the southwest corner of Federal Avenue and First Avenue.

Site Code: 600-172 Classification: Accepted

Site Names: 600-172, White Bluffs French Drain or Dry ReClassification: Rejected (10/6/1997)

Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is either a french drain or dry well that is a 61 centimeter concrete pipe, that has a steel

Description: lid, and appears to be about 1 meter deep. The sides are perforated, indicating that its purpose

may have been for storm runoff or steam condensate. There does not appear to be an inlet pipe

inside the structure.

Waste Type: Steam Condensate

Waste Possibly, the waste was steam condensate.

Description:

Site Code: 600-173 Classification: Accepted

Site Names: 600-173, White Bluffs Domestic Debris ReClassification: Rejected (10/6/1997)

Dump and Building Foundations

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The site is a domestic type waste dump and pre-Manhattan Engineering District building

Description: foundations. The waste dump consists of miscellaneous debris and the building foundations

appear to be pre-Manhattan Engineering District. One building appears to have been a garage or

farm shop because of the way that the concrete was formed.

Waste Type: Misc. Trash and Debris

Waste The waste consists of miscellaneous debris including domestic bottles, glassware, paint cans,

Description: cans, containers of heavy industrial nuts and bolts (greater than 2.5 cm in diameter). Two

building foundations are also included as a part of the site.

Site Code: 600-174 Classification: Accepted

Site Names: 600-174, White Bluffs French Drain ReClassification: Rejected (10/6/1997)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a 61 centimeter vitrified clay pipe french drain. The top is flush with the surface and it

Description: is filled with rocks.

Waste Type: Steam Condensate

Waste The french drain may have been used to dispose of steam condensate.

Description:

Site Code: 600-175 Classification: Accepted

Site Names: 600-175, Original Priest Rapids Ice House ReClassification: Rejected (10/6/1997)

Drain Field

Site Type:Drain/Tile FieldStart Date:Site Status:InactiveEnd Date:

Site The site is three large depressions thought to be the original drain field for waste water generated

Description: at the ice house. The site was originally marked by a steel post and wooden rail fence that can

still be found around much of the site.

Waste Type: Water

Waste The waste was waste water. It is unknown if other wastes were disposed of at the site or if the

Description: site was used for other purposes.

Site Code: 600-176 Classification: Accepted

Site Names: 600-176, White Bluffs Paint Disposal Area ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a dumping area where it appears that excess paint materials were disposed of by

Description: pouring them on the ground. The ground has dried paint chips on the surface. The paint spills

and chips are scattered over a large area.

Waste Type: Construction Debris

Waste Paint chips are on the surface of the ground.

Description:

Site Code: 600-177 Classification: Accepted

Site Names: 600-177, White Bluffs Pipe Bender and ReClassification: Rejected (10/6/1997)

Equipment Dumping Area

Site Type: Dumping Area Start Date:

Inactive **End Date: Site Status:**

Site

The site consists of two areas that are within close proximity. The pipe bender is a large heavywalled pipe, placed vertically in the ground with approximately 1.2 meters (4 feet of the pipe **Description:**

extending above grade. Several holes of varied sizes have been drilled into the vertical pipe. The holes are the approximate size of varied small diameter pipes. The structure is assumed to have been used to do rough bending of pipe. Adjacent to the pipe bender is a large area of debris that appears to have been a miscellaneous equipment dumping/storage area. Random dumping of

small quantities of oils also occurred in the area.

Waste Type: Oil

Waste The site shows evidence of random oil dumping.

Description:

Site Code: 600-179 Classification: Accepted

Site Names: 600-179, Priest Rapids Ice House **ReClassification:** Rejected (10/6/1997)

Burial Ground Start Date: 1943 **Site Type:**

Site Status: End Date: Inactive

Site The site is the remains of the Priest Rapids Ice House that was demolished in situ in 1975.

Description:

Waste Type: Demolition and Inert Waste

The waste consists of the demolished facility buried in place in 1975. Occasionally small pieces Waste

of wood and clay can be observed on the surface **Description:**

Site Code: 600-180 **Classification:** Accepted

600-180, White Bluffs Suspect Automotive **ReClassification:** Rejected (10/6/1997) **Site Names:**

Repair Shop

Site Type: Maintenance Shop **Start Date:** Inactive **Site Status: End Date:**

Site The site is described as the remains of what appears to have been an automotive repair shop.

Description:

Waste Type: Chemicals

Waste The waste may have been solvents, grease, antifreeze, oils, gasoline. Concern was expressed by the Environmental Protection Agency (EPA) because of the types of materials usually found at **Description:**

an automotive repair shop. However, there is no evidence of this type of disposal. (Per Discovery Site Evaluation Checklist completed by Steve Weiss 8/6/96). Remaining surface

material consists of jack stands, car parts, wooden debris, and other metallic debris.

During the May 1999 visit, the following were observed: light fixtures, paint cans, a muffler, lumber, sections of what appears to be stove pipe, a 55 gallon drum marked "Property of Shell Oil," and buckets containing what appeared to be tar. The site's remains didn't suggest an

automotive repair shop as much as a supply hut.

Site Code: 600-181 **Classification:** Accepted Site Names: 600-181, White Bluffs Oil Dump ReClassification: Interim Closed Out (9/12/2003)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was an oil dumping area. The surface was near asphalt-like in appearance as a result of

the large quantities of oil that had been dumped.

Waste Type: Oil

Waste The waste was oil contaminated soil. The top of the soil had formed into an asphalt-like surface.

Description:

Site Code: 600-182 Classification: Accepted

Site Names: 600-182, White Bluffs Asbestos Pipe ReClassification:

Lagging and Excess Piping

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is excess piping materials and an area of highly degraded piping insulation that appears to

Description: be made of asbestos or a similar material. Several 6.1-meter (20-foot) sections of 30.5-centimeter

(12-inch) spiral welded steel pipe are nearby. Other small debris piles are located very nearby that consist of broken vitrified clay piping, plumbing fixtures, and concrete piping.

Waste Type: Asbestos (friable)

Waste The waste is piping insulation material that appears to be made of asbestos or a similar material.

Description:

Site Code: 600-183 Classification: Accepted

Site Names: 600-183, White Bluffs Burn Pile and Debris ReClassification: Rejected (10/6/1997)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a burn pile and debris dumping area. Within the site is one area consisting of a burn

Description: pile of domestic type debris. The other area consists of 5 gallon military type drums.

Waste Type: Misc. Trash and Debris

Waste The waste consists of miscellaneous debris, including domestic type debris and military drums.

Description: It is unknown if any hazardous materials remain.

Site Code: 600-184 Classification: Accepted

Site Names: 600-184, White Bluffs Townsite Septic ReClassification: Rejected (10/6/1997)

System

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site is a concrete box with a metal lid. It is about 0.61 meters deep (2 feet) and is dry inside.

Description:

Waste Type: Sanitary Sewage

Waste

The waste is sanitary sewage (if the septic tank and/or drainfield could be located).

Description:

Site Code: 600-188 Classification: Accepted

Site Names: 600-188, White Bluffs Waste Disposal **ReClassification:**

Trench 2

Site Type:TrenchStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is an open trench with industrial wastes filling about one-third of the site. There is evidence of chemical or oil dumping and burning along the east side of the trench. The White Bluffs Technical Baseline Report (BHI-00448) states the evidence includes discolored soils and empty 208-liter (55-gallon) drums that are bulging, as if its contents had been burned within the drums.

During the April 1999 visit, three empty 208-liter (55-gallon) drums were observed. Only one of them appeared to be bulging. The drums are concentrated near the eastern edge of the site. The chemical or oil dumping and burning appears to have been confined to the area around these drums.

Waste Type: Misc. Trash and Debris

Waste The waste consists of industrial wastes of wooden and metallic debris. There has been chemical

Description: or oil dumping and burning. There are also empty 208-liter (55-gallon) drums.

Site Code: 600-189 Classification: Accepted

Site Names: 600-189, White Bluffs Warehouse Facility ReClassification: Rejected (1/26/1998)

French Drains, 100-H-23

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is three french drains associated with a large warehouse and temporary construction

Description: The area near the french drains is littered with debris and patches of gravel. There is no

oil-stained soil or other indication of hazardous waste disposal at or near the french drains.

Waste Type: Water

Waste The waste may have been wastewater/stormwater.

Description:

Waste Type: Asbestos (non-friable)

Waste Transite siding was scattered throughout the area.

Description:

Site Code: 600-190 Classification: Accepted

Site Names: 600-190, White Bluffs Warehouse Tar ReClassification: Interim Closed Out (9/16/2003)

and/or Paint Disposal Area

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site has been remediated and closed out.

Description:

The site was an area where tar and/or paints appeared to have been dumped.

Waste Type: Chemicals

Waste The waste site consisted of tar and/or paint that had been dumped on the ground.

Description:

Site Code: 600-191 Classification: Accepted

Site Names: 600-191, White Bluffs Pre-MED **ReClassification:**

Community Dump Site 2

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is an area littered with miscellaneous trash and debris, including a few full 19-liter (5-gallon) cans of grease that were dumped on the ground in the southern section of the site. It also appears that some burning did occur at this location, but to a much smaller degree than at the White Bluffs Pre-Manhattan Engineering District Community Dump Site 1. Because of the large number of oil cans found at the site, it is believed that the site was used by both Manhattan Engineering District and White Bluffs residents for the disposal of domestic waste materials.

During the April 1999 walkdown, the cans of grease mentioned in the Technical Baseline Report could not be found. The debris is concentrated in a swath along the west side of a dirt road. Areas devoid of vegetation were observed.

Waste Type: Misc. Trash and Debris

Waste Description:

The waste is miscellaneous trash and debris, including oil cans, cans, glass, domestic debris, car parts, and a few full 19-liter (5-gallon) cans of grease.

During the April 1999 visit, the cans of grease described in the Technical Baseline Report could not be found. However, in addition to the debris already mentioned above, antifreeze containers and dry cell batteries were observed.

Site Code: 600-193 Classification: Accepted

Site Names: 600-193, White Bluffs Gas Station **ReClassification:** Rejected (10/6/1997)

Site Type:Storage TankStart Date:1942Site Status:InactiveEnd Date:1975

Site Description:

The site is located in a shallow depression with heavy tumbleweed and cheatgrass growth. Prior to November 1997, the depression had been marked with a steel post and chain barrier and posted with two "DANGER KEEP AWAY" signs. The posts and chains were removed on November

19, 1997.

Site Code: 600-194 Classification: Accepted

Site Names: 600-194, White Bluffs Main Pipe ReClassification: Rejected (10/6/1997)

Fabrication Shop, Main Pipe Fabrication

and Blacksmith Shop

Site Type:Fabrication ShopStart Date:Site Status:InactiveEnd Date:

Site The site is the remnants of pipe fabrication shop. The building footprint can be discerned by

Description: observing the disturbed ground surface and the lack of rabbitbrush as compared to the

surrounding terrain. In some areas near the western portion of the site, the concrete floor is visible. The floor appears to be intact, but much of it is covered by soil. Waste materials observed at the site include wood, coal, metal, metal lathe turnings, pipe, nails, brick, and

concrete.

Waste Type: Misc. Trash and Debris

Waste The site contains concrete, brick, wood, coal, metal, and small amounts of glass. The Main Pipe **Description:** Fabrication And Blacksmith Shop used acids and solvents in the pipe fabrication process which

Fabrication And Blacksmith Shop used acids and solvents in the pipe fabrication process which may have contaminated the waste materials and soil remaining at the site. Carbon tetrachloride

was a common degreasing agent at the time and may be present in the debris.

Site Code: 600-195 Classification: Rejected (10/6/1997)

Site Names: 600-195, White Bluffs Townsite Electrical **ReClassification:**

Substation

Site Type: Electrical Substation Start Date:
Site Status: Inactive End Date:

Site The site is the location of a demolished substation that serviced the White Bluffs Townsite. The

Description: site had two footprints measuring 4.3 meters by 3.8 meters and 1.8 meters by 5.5 meters (14 feet

by 11 feet and 6 feet by 18 feet). The footprints of the former substation site are still visible.

The soil at the site is sandy. Cheatgrass vegetation growth within the site appears stunted and indicates the size and location of the former site. There is no evidence of oil spills or stains in the

soil at this site or the ground surrounding the site.

Waste Type: Soil

Waste No waste was observed at the site.

Description:

Site Code: 600-196 Classification: Rejected (10/6/1997)

Site Names: 600-196, White Bluffs Farm Dump Site and **ReClassification:**

Partially Backfilled Pit

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is areas of randomed scattered debris and a pit. The debris includes cans, bottles, barbed

Description: wire and car parts scattered along the west side of a dirt road. The pit is a fairly large excavation

on the east side of the road and shows no evidence of being used as a waste site.

Waste Type: Misc. Trash and Debris

Waste Cans, glass, barbed wire, and auto parts

Description:

Site Code: 600-198 Classification: Rejected (10/6/1997)

Site Names: 600-198, White Bluffs River Bank **ReClassification:**

Concrete Structure, RCRA General Inspection LORIVFY96 Item #2

Site Type: Foundation Start Date:
Site Status: Inactive End Date:

Site The site is a box shaped concrete structure partially buried in the river bank. The site appears to

Description: have slid partially down the bank. The structure is filled with dirt and debris. There is a large

quantity of 0.635 centimeter (0.25 inch) nylon tubing hanging around and in the structure. Four steel pipes extend from each corner of the box. An electrical conduit also extends from the box.

A square notch was observed on a top corner of the box.

Waste Type: Construction Debris

Waste Concrete, steel pipe, and nylon tubing.

Description:

Site Code: 600-199 Classification: Accepted

Site Names: 600-199, White Bluffs Ash Covered ReClassification: Rejected (3/11/1998)

Concrete Pad

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a concrete foundation pad that is completely covered with coal ash. The original

Description: purpose of the pad is unknown.

Waste Type: Ash

Waste The waste is coal ash which is a state regulated solid waste. The waste has been placed in a

Description: waste pile (discernible unit).

Waste Type: Asbestos (non-friable)

Waste Transite siding was scattered throughout the area.

Description:

Site Code: 600-200 Classification: Accepted

Site Names: 600-200, Priest Rapids Ice House Septic ReClassification: Rejected (10/6/1997)

Tank

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site is a large septic tank thought to have been associated with the Priest Rapids Ice House.

Description:

Waste Type: Sanitary Sewage

.. . . .

Waste The waste is a septic tank, possibly containing human septage. Septage is a state regulated solid

Description: waste.

Site Code: 600-201 Classification: Accepted

Site Names: 600-201, White Bluffs Paint and Solid **ReClassification:** No Action (9/12/2003)

Waste Disposal Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site has been evaluated to confirm that it does not require remediation. The site has been

Description: reclassified to "No Action".

Waste Type: Misc. Trash and Debris

Waste The waste was red paint and other debris including, glass, metal shavings, metal parts, and army-

Description: green canvas material.

Site Code: 600-203 Classification: Accepted

Site Names: 600-203, White Bluffs French Drains ReClassification: Rejected (10/6/1997)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The White Bluffs Technical Baseline Report states the site is two french drains and what appears

Description: to be a valve box. No additional information is known. A RARA Walkdown visit done in May

1999 found an additional small subsidence near the valve box and noticed a long narrow area of disturbed vegetation that may indicate these structures were part of an old irrigation system. A

third french drain was also observed and mapped as a new component of this site.

Waste Type: Steam Condensate

Waste The waste may have been steam condensate.

Description:

Site Code: 600-209 Classification: Accepted

Site Names: 600-209, White Bluffs Excess Railroad Tie ReClassification: Rejected (10/6/1997)

Materials

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is several stacks of excess railroad ties. The ground surface at the site appears to have **Description:** been graveled, suggesting that the entire area was a warehouse area for industrial type materials.

During the May 1999 visit, it was observed that scattered stacks and piles of railroad ties were found in a large undefined area on both sides of a powerline road. Ties were found to the west

and south of 600-188.

Waste Type: Oil

Waste The waste is creosote soaked railroad ties and possibly creosote in the soil underneath the

Description: railroad ties. The Regulators were concerned about this site for the reasons stated above.

Site Code: 600-234 Classification: Rejected (5/31/2001)

Site Names: 600-234, RCRA General Inspection **ReClassification:**

200WFY97 Item #11 Historic Disposal Site

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is pre-Hanford farmstead debris. The site contains miscellaneous materials including

Description: cans, bottles, sheetmetal, and wire. The site covers an area approximately 45.7 meters (150 feet)

square.

Waste Type: Misc. Trash and Debris

Waste The waste is pre-Hanford homestead waste, including metal, glass, and wire.

Description:

Site Code: 600-263 Classification: Accepted

Site Names: 600-263, Pile of Cans and White Powder **ReClassification:** Rejected (5/31/2001)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site There are seven cans scattered within a distance of 2 meters (6.6 feet) of each other. The cans are

Description: rusty and approximately 20 centimeters (8 inches) long. Most of the cans are broken open,

revealing their current contents of calcium carbonate. No vegetation stress was noticed. A few of the cans were intact, but appeared to be empty. Some lettering could be seen on the cans. Some of the cans were marked "RL - HAR, 300 Order, -------MMABLE, Sealed For Use" One intact canister is located approximately 6 meters (20 feet) from the group of ruptured cans. It has

lettering that reads "-----RAY, HARGE, Y-45-SE-6".

Waste Type: Abandoned Chemicals

Waste The chemical originally in the cans was calcium hydride, with a chemical formula of CaH2-.

Description: Hydrogen and calcium hydroxide are produced when calcium hydride is mixed with water.

Calcium hydroxide rapidly decomposes to calcium carbonate in the environment.

Site Code: 600-279 Classification: Accepted

Site Names: 600-279, Vegetation Free Area Between **ReClassification:**

White Bluffs and 100F

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is a large area of white ash surrounded by dried grass.

Description:

Site Code: 628-1 Classification: Accepted

Site Names: 628-1, White Bluffs Burn Pit ReClassification: Interim Closed Out (9/16/2003)

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

In the 2003 Waste Site Evaluation document (0600X-CA-V0034), this unit was described as a triangle shaped area, covered with sand and gravel. The original WIDS Information form (Rod Griffin, 2/28/1990) described the area as a pit. It cannot be determined if the gravel was natural erosion, backfill, or both. Physical evidence (e.g. small pieces of ash, etc.) indicates that the area affected was approximately 0.1 hectare (1/4 acre). Vegetation was stressed. Rabbit brush growth was almost nonexistent compared to the growth on the surrounding terrain and tumbleweeds were discolored and stressed.

Waste Type: Misc. Trash and Debris

Waste Soil sampling will be required to determine what contaminants are present.

Description:

100-IU-3

Site Code: 600-6 Classification: Accepted

Site Names: 600-6, MIL - H-12-L, Battery B Nike ReClassification: Rejected (1/30/2003)

Missile Launch Site

Site Type:Military CompoundStart Date:1953Site Status:InactiveEnd Date:1960

Site The unit is an abandoned military installation consisting of concrete foundation pads, a backfilled

Description: underground storage area, a 3-4 ft deep excavation, and a large soil depression at the northwest corner of the unit. All above-ground structures were sold to Washington State University prior to

1974 and have been removed.

Waste Type: Demolition and Inert Waste

Waste Only concrete building foundations and a soil depression remain. An Acid pit was sampled but

Description: no hazards were identified.

Site Code: 600-7 Classification: Accepted

Site Names: 600-7, Nike Asbestos Pipe Site, ReClassification: Rejected (1/30/2003)

Concrete/Asbestos Pipe Site

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The unit is a depression containing miscellaneous debris and exposed pieces of concrete/asbestos

Description: pipe.

Waste Type: Demolition and Inert Waste

Waste This unit contains concrete/asbestos pipe, concrete, and miscellaneous construction debris.

Description:

Site Code: 600-8 Classification: Accepted

Site Names: 600-8, MIL - H-06C, Control Center for ReClassification: Deleted From NPL (7/8/1998)

Battery A Nike Missile, Wahluke Slope Nike Missile Base, WSNMB, 600-103

(Part)

Site Type:Military CompoundStart Date:1950Site Status:InactiveEnd Date:1964

Site The unit is an abandoned military installation which consisted of a few concrete foundation pads, and a possible disposal location at a leveled area on the north side of the access road. Over the

and a possible disposal location at a leveled area on the north side of the access road. Over the nearby cliff in the "saddle" were a few 19 and 208 liter (5 and 55 gallon) drums and a small amount of debris. The Camp Hanford Forward Positions Descriptive Summary states that two 7600 liter (2000 gallon) underground storage tanks were included in the list of structures at this site. It also lists one 1500-gallon oil tank, but does not show it as an underground tank. The document also states that all listed structures were sold to Washington State University and

removed.

Wasta Tamas Danielikian and Insut Wasta

waste Type: Demolition and Inert Waste

Waste The unit waste includes lumber, concrete, empty 5 gallon and 55 gallon containers and

Description: miscellaneous debris.

Site Code: 600-9 Classification: Accepted

Site Names: 600-9, MIL - H-06L, Battery A Nike ReClassification: Deleted From NPL (7/8/1998)

Missile Installation Launch Site, Wahluke Slope Nike Missile Base, WSNMB, 600-

103 (Part)

Site Type:Military CompoundStart Date:1951Site Status:InactiveEnd Date:1964

Site This unit is an abandoned military site. All surface structures have been removed or leveled.

Description: Remaining features include a building foundation, roadways, parking areas, and drainage

structures. The underground structure has been backfilled with 29 cubic yards of slurry. A 55 gallon drum buried to its rim, presumed to be a drywell, was also backfilled. Its function is

unknown.

The two associated landfills were remediated to remove debris discovered during geophysical surveys. Each of the anomalies that were found by the geophysics (25 locations in the west landfill and 19 locations in the east landfill) were excavated for examination and removal of debris.

Waste Type: Demolition and Inert Waste

Waste The unit contained miscellaneous debris including: paint cans, construction materials, asbestos

Description: siding and brake pads, and exposed re-bar associated with structure foundations.

Site Code: 600-10 Classification: Accepted

Site Names: 600-10, MIL - H-12C, Battery B Nike ReClassification: Rejected (1/30/2003)

Missile Control Center

Site Type:Military CompoundStart Date:1953Site Status:InactiveEnd Date:1960

Site This unit is an abandoned military site. Unit structures include a building foundation with

Description: exposed rebar, and a trench to the north of the site.

Waste Type: Demolition and Inert Waste

Waste Wastes identified at the unit include a 5-gallon can of military lubricant (containing minimal amounts of free product), wire, several paint and lubricant cans, and some re-bar associated with

amounts of free product), wife, several paint and fuorteant earls, and some re-bar associated with

building foundation,

Site Code: 600-11 Classification: Accepted

Site Names: 600-11, MIL - H-81R ReClassification: Rejected (1/30/2003)

Site Type:Military CompoundStart Date:1953Site Status:InactiveEnd Date:1960

Site The unit is an abandoned military installation. The unit consists of partially remaining concrete **Description:**

foundation pads, a large disturbed area (possible site landfill) on the west end of the unit, a

drywell constructed from a buried 55 gallon drum and a small soil berm near the south-east corner

of the unit.

Waste Type: Demolition and Inert Waste

Wastes identified at the unit are miscellaneous surface debris including batteries and bottles and Waste

Description: a buried, open-top 55-gallon drum.

Site Code: 600-12 **Classification:** Accepted

Site Names: 600-12, MIL - H-83C, Battery C Control **ReClassification:** Rejected (1/30/2003)

Center

Site Type: Military Compound **Start Date:** 1956 **Site Status:** Inactive **End Date:** 1960

Site This unit is an abandoned military installation, a control center for a Nike missile site.

Description:

Waste Type: Demolition and Inert Waste

The unit waste includes several hundred rounds of spent 30/06 casings, steel links for belt-fed Waste

Description: automatic weapons, and several tires.

600-13 Site Code: **Classification:** Accepted

600-13, MIL - H-83L, Battery "C" Launch **ReClassification:** Rejected (1/30/2003) **Site Names:**

Site, PSN 80

Site Type: Military Compound **Start Date:** 1955 **Site Status: End Date:** 1974 Inactive

This unit is an abandoned military installation. Buildings and other above ground structures have Site

been removed. Underground structures have been filled with the exception of a well. An **Description:**

apparent disposal area exist west and north of the unit.

Waste Type: Demolition and Inert Waste

Waste Wastes identified at the unit are miscellaneous disposal area debris, material from 1960's

Description: practice maneuvers, and miscellaneous trash scattered over a 50 acre area.

Site Code: 600-14 **Classification:** Accepted

600-14, MIL - PSN 01 ReClassification: Rejected (1/30/2003) **Site Names:**

Site Type: Military Compound **Start Date:**

1960 **Site Status:** Inactive **End Date:**

The unit is an abandoned military tent camp and anti-aircraft battery site. Site

Description:

During the April 1999 visit, no foundations were observed but several regular shaped disturbed areas and chunks of concrete were visible. What appeared to be an abandoned well was found

under a removable metal cover. There is an area of erosion or subsidence with exposed concrete along the edges. Circular areas with little or no vegetation were also seen around the site. Mature trees, grasses and 0.6 to 1.2 meter (2 to 4 foot) tall sagebrush cover the site. An underground septic tank and drain field may still exist as there is no record of them being removed.

The well that serviced the position was 892 feet deep, and drilled in 1953.

Site Code: 600-15 Classification: Accepted

Site Names: 600-15, MIL - PSN 04 ReClassification: Rejected (1/30/2003)

Site Type:Military CompoundStart Date:1950Site Status:InactiveEnd Date:1960

Site This unit is an abandoned tent camp and anti-aircraft battery. This unit consisted of a well

Description: marked "contaminated", and foundations for anti-aircraft gun emplacements.

Waste Type: Demolition and Inert Waste

Waste The waste at the unit consists of several unlabeled yellow 5-gallon containers, several blue **Description:** plastic 55-gallon drums that are marked with "Sterling Imaging Inc. Pasco WA." construction

debris, and miscellaneous trash.

Site Code: 600-16 Classification: Accepted

Site Names: 600-16, MIL - PSN 07/10, PSN 10, H-07- ReClassification: Rejected (1/30/2003)

H, Base Camp 500

Site Type:Military CompoundStart Date:1952Site Status:InactiveEnd Date:1961

Site The unit is an abandoned military installation. It was the Headquarters for the Antiaircraft battalion and later the Headquarters for the Nike battalion. Before final cleanup, the site

consisted of a 3 foot by 8 foot by 18-inch wooden underground structure, a grease pit, a concrete lined pit, building foundations and a french drain constructed from two 55-gallon steel drums.

Site Code: 600-17 Classification: Accepted

Site Names: 600-17, MIL - PSN 12/14 Site and Military ReClassification: Rejected (1/30/2003)

Dump, Tent Camp 505, PSN 12, H-14

Site Type:Military CompoundStart Date:1950Site Status:InactiveEnd Date:1960

Site This site is an abandoned military installation. The site includes a small burial site located on the

Description: southern edge of the camp site, a large dump site located southeast of the camp site in a shallow

gully, a well, and an 8 foot by 8 foot underground room. All of the buildings have been removed.

Waste Type: Demolition and Inert Waste

Waste The waste at the unit consisted of metal scraps, old paint cans, commissary-type waste (e.g., **Description:** food cans, condiment containers and beer bottles), washing machine parts, a water tank, a water

food cans, condiment containers and occi bottles), washing machine parts, a water tank, a water

heater, 1-gallon solvent cans, and artillery shell packing boxes marked 120 M.

Site Code: 600-18 **Classification:** Accepted

600-18, MIL - PSN 72/82, PSN 72, H-82, **Site Names: ReClassification:** Rejected (1/30/2003)

Tent Camp 515

Military Compound **Start Date:** 1951 **Site Type: Site Status:** Inactive **End Date:** 1961

Site The site is an abandoned military tent camp site. The unit consisted of a few small disposal pits

Description: and piles located west of the road and a small firing range located at the northeast corner of the unit. Two buried plywood boxes (2 X 4 feet) were identified with their tops flush with the ground

surface. One box contained empty 5 gallon cans of lubricant. The gun emplacements and all above ground structures have been removed. A disposal area was identified with a considerable

amount of surface debris: all debris has been removed.

Demolition and Inert Waste Waste Type:

Waste The unit contained wood debris, empty 5-gal and 1-quart oil cans, an empty 5 gallon can of **Description:**

lubricant, artillery packing materials, two partially buried plywood boxes, ash, communications

wire, cable, lead and brass. The unit also contained a septic tank.

600-19 Site Code: **Classification:** Accepted

Site Names: 600-19, MIL - PSN 90, H-90, Base Camp **ReClassification:** Rejected (1/30/2003)

Site Type: Military Compound **Start Date: End Date: Site Status:** Inactive

Site This is an abandoned military installation. Before final cleanup in 1994, structures included a

concrete foundation pad, an abandoned well, a usable well, and a recently used old oil rack and grease pit. Other unit features include an old dumping ground (located south of Highway 24),

several trash pits, and a 10 feet by 15 feet by 4 feet deep trench.

During the April 1999 visit, several concrete foundations and walkways were observed, as well as a stone wall, earthen mounds and a small brick structure. Mature trees are growing around the

abandoned installation.

Waste Type: Demolition and Inert Waste

Unit waste consists of small amounts of refuse including tent parts electrical parts, automobile Waste

parts, and sand bag material. In addition, a small area of the ground is oil stained near the oil

rack.

Site Code: 600 - 72**Classification:** Accepted

Site Names: 600-72, Wahluke Slope H-12-R Debris **ReClassification:** Rejected (1/30/2003)

Site, H-12R

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

Site The site is an abandoned military dump site that runs east-west approximately 5 acres in size.

Description:

Description:

Description:

Waste Type: Construction Debris

Waste The primary hazard at this site is construction debris including domestic garbage, wood, oil

Description: cans, and 55 gallon drum. Visible debris has been removed.

Site Code: 600-73 Classification: Accepted

Site Names: 600-73, Wahluke Slope Igloo Sites ReClassification: Rejected (1/30/2003)

Site Type: Military Compound Start Date:
Site Status: Inactive End Date:

Site This is the site of two ammunition storage "igloos." The buildings have been removed and the

Description: area has generally been cleaned up.

Waste Type: Misc. Trash and Debris

Waste The debris at this site included a stock watering drum, glass bottles, tin cans, barbed wire, and

Description: other garbage. The debris has been removed.

Site Code: 600-74 Classification: Accepted

Site Names: 600-74, Wahluke Slope PSN 12/14 ReClassification: Rejected (1/30/2003)

Military Construction Dump, Motor Pool

Dump

Site Type:Military CompoundStart Date:1950Site Status:InactiveEnd Date:1960

Site This dump site is located approximately 2/3 miles north and east of the PSN 12/14 camp

Description: location. It is an area of building remains, trash and debris extending in an east-west direction

near the border of sections 13 and 24 in Section T14N R27E. Lubricant cans and automobile parts suggested some of the trash may be from a military motor pool. Construction debris (boards

with nails) is all that remains in 2001.

Waste Type: Construction Debris

Waste Miscellaneous debris and trash from demolished wooden buildings, automobile parts and 1

Description: gallon and 5 gallon oil cans. The automobile parts and cans suggest the trash may have come

from a motor pool.

Site Code: 600-75 Classification: Accepted

Site Names: 600-75, Wahluke Slope PSN 80 Debris Site ReClassification: Rejected (1/30/2003)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is no longer visible. The debris was removed.

Description:

Waste Type: Misc. Trash and Debris

Waste Description:

The debris at this site included building materials, insulators, glass bottles, tin cans, cable, and other garbage. Two septic tanks openings were discovered at this site. These tanks were filled

with 16 yd3 (12.2 m3) of concrete. The debris was picked up. An area of petroleum-

contaminated soil around a concrete well structure was excavated and five 55 gallon (208 L)

drums of contaminated soil were removed.

Site Code: 600-76 Classification: Accepted

Site Names: 600-76, Wahluke Slope Radar Site, ReClassification: Rejected (1/30/2003)

Underground Rooms

Site Type:Military CompoundStart Date:Site Status:InactiveEnd Date:

Site The site is on Wahluke Slope, north of the 100H area and just north of Highway 24. It is southeast of PSN 04. It consists of three underground rooms. Two are intact and one has

southeast of PSN 04. It consists of three underground rooms. Two are intact and one has been destroyed. Each room is approximately 10 by 10 by 10 ft (3.0 by 3.0 by 3.0 m). Northwest of each room is set of concrete pads with exposed bolts. The pads apparently served as a foundation for towers or large guns. The site is not included on military maps. It is similar to the PSN 80 and H-12R sites. The site is roughly oval, approximately 1/4 miles (400 m) by 400 yard (370 m),

and surrounded by a gravel

Site Code: 600-77 Classification: Accepted

Site Names: 600-77, Wahluke Slope Shrapnel Sites, ReClassification: Rejected (1/30/2003)

Antiaircraft Gun Shrapnel Sites 1, 2, 3

Site Type: Military Compound Start Date:
Site Status: Inactive End Date:

Site The shrapnel sites are three known separate areas containing shrapnel from antiaircraft gun firing

Description: on the North Slope.

Waste Type: Ordnance

Waste Two pieces of aluminum or magnesium shrapnel have been found at Shrapnel Site 2. Two

Description: pieces of iron or steel shrapnel have been found at Shrapnel Site 3. At the major shrapnel area,

Shrapnel Site 1, it is reported that over 100 lbs (45 kg) of shrapnel has been found. Shrapnel

consists of iron fragments and aluminum or magnesium fuze ring pieces.

Site Code: 600-78 Classification: Accepted

Site Names: 600-78, Power Pole 12-3 Cistern, 12-3 ReClassification: Rejected (1/30/2003)

Cistern

Site Type:Catch TankStart Date:Site Status:InactiveEnd Date:

Site The cistern is approximately 5 ft (1.5 m) in diameter by 8 ft (2.4 m) deep.

Description:

Waste Type: Demolition and Inert Waste

Waste The homestead cisterns were relatively free of debris, except for wood. The cistern was filled **Description:** with approximately 10 yards³ (7.7 m³) of pit-run gravel. Nearby debris has been removed.

Site Code: 600-79 Classification: Accepted

Site Names: 600-79, Wahluke Slope Clay Pit Cistern ReClassification: Rejected (1/30/2003)

Site Type:Catch TankStart Date:Site Status:InactiveEnd Date:

Site The clay pit cistern is a circular, concrete-lined pit approximately 5 ft 6 in (1.7 m) deep and 5 ft **Description:** (1.5 m) wide. It is located near a pit that was used to obtain clay for lining irrigation canals. No

obvious disposal pits remain from the homestead.

Waste Type: Demolition and Inert Waste

Waste The debris at this site included glass bottles, tin cans, asbestos pipe, and other garbage.

Description:

Site Code: 600-80 Classification: Accepted

Site Names: 600-80, Wahluke Slope Cow Camp Cistern ReClassification: Rejected (1/30/2003)

Site Type: Catch Tank Start Date:
Site Status: Inactive End Date:

Site The cistern is approximately 4 ft 8 in (1.4 m) in diameter. A depth value was not estimated during

Description: original site investigation because the cistern was filled with debris. Later documents do not

mention a measured depth.

Waste Type: Demolition and Inert Waste

Waste The debris at this site included glass bottles, tin cans, and other garbage. Several of the empty

Description: bottles were from livestock antibiotic and pesticide for delousing cattle.

Site Code: 600-81 Classification: Accepted

Site Names: 600-81, Wahluke Slope Homestead Cistern ReClassification: Rejected (1/30/2003)

Site Type:Settling TankStart Date:Site Status:InactiveEnd Date:

Site The site is a pre-Hanford cistern measuring approximately 5 to 6 feet in diameter. Debris was

Description: identified in the bottom of the cistern.

Waste Type: Misc. Trash and Debris

Waste The debris at the bottom of the cistern appeared to be homestead-associated food containers.

Description:

Site Code: 600-82 Classification: Accepted

Site Names: 600-82, Wahluke Slope Overlook Cistern ReClassification: Rejected (1/30/2003)

Site Type: Catch Tank Start Date:

Site Status: Inactive End Date:

Site This cistern is approximately 10 ft (3.0 m) in diameter by 14 ft (4.3 m) deep.

Description:

Waste Type: Demolition and Inert Waste

Waste Description:

Site Code: 600-83 Classification: Accepted

Site Names: 600-83, Wahluke Slope Stock Tank Cistern ReClassification: Rejected (1/30/2003)

Site Type:Catch TankStart Date:Site Status:InactiveEnd Date:

Site The stock tank is approximately 12 ft (3.7 m) by 12 ft (3.7 m) by 5 ft (1.5 m) deep. No obvious

Description: disposal pits remain from the homestead. The structure is partially above ground. A well with an

approximate 8 in (20 cm) diameter casing is nearby.

Waste Type: Demolition and Inert Waste

Waste Description:

Site Code: 600-84 Classification: Accepted

Site Names: 600-84, Wahluke Slope Wagon Road ReClassification: Rejected (1/30/2003)

Cistern

Site Type:Catch TankStart Date:Site Status:InactiveEnd Date:

Site The cistern is approximately 8 ft (2.4 m) in diameter by 8 ft (2.4 m) deep. Some small disposal

Description: pits remain from the homestead.

Waste Type: Demolition and Inert Waste

Waste Debris at this site included glass bottles, tin cans, and other garbage.

Description:

Site Code: 600-85 Classification: Accepted

Site Names: 600-85, Wahluke Slope Stove Cistern ReClassification: Rejected (1/30/2003)

Site Type: Catch Tank Start Date:
Site Status: Inactive End Date:

Site Located on Wahluke Slope, east of 100F Area, east-southeast of 100H Area.

Description:

Waste Type: Demolition and Inert Waste

Waste Description:

Site Code: 600-86 Classification: Accepted

Site Names: 600-86, Wahluke Slope Wasteway Cistern ReClassification: Rejected (1/30/2003)

Site Type: Catch Tank Start Date:
Site Status: Inactive End Date:

Site The cistern is approximately 8 ft (2.4 m) in diameter by 3 ft (0.9 m). The walls are partially

Description: collapsed. The cistern has been filled with gravel. No obvious disposal pits remain from the

homestead.

Waste Type: Demolition and Inert Waste

Waste Debris at this site included glass bottles, tin cans, cable, concrete, and other garbage.

Description:

Site Code: 600-87 Classification: Accepted

Site Names: 600-87, Wahluke Slope Dune Homestead ReClassification: Rejected (1/30/2003)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The homestead is made up of some building locations and a domestic trash disposal area. The

Description: homestead is near a series of sand dunes.

Waste Type: Misc. Trash and Debris

Waste Debris consisted of domestic trash, parts of a barn or shed, parts of a flour mill, carriage pieces

Description: and a harness.

Site Code: 600-88 Classification: Accepted

Site Names: 600-88, Wahluke Slope Lonetree ReClassification: Rejected (1/30/2003)

Homestead

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of a single live cherry tree, several dead trees and some small disposal areas.

Description:

Waste Type: Misc. Trash and Debris

Waste Debris consisted of metal cans and broken glass.

Description:

Site Code: 600-89 Classification: Accepted

Site Names: 600-89, Wahluke Slope Asphalt Batch Plant ReClassification: Rejected (1/30/2003)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This area appears to have been used as a temporary batch plant for mixing asphalt for paving

Description: operations. It is a graveled area approximately 2 acres in size. Two adjacent pits were used for

disposal of concrete. The original users of the area are unknown.

Waste Type: Demolition and Inert Waste

Waste Debris from this site included asphalt, concrete, sheet metal, and other debris.

Description:

Site Code: 600-90 Classification: Accepted

Site Names: 600-90, Wahluke Slope Coyote Bait ReClassification: Rejected (1/30/2003)

Can/Bait Station

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This unit is composed of two separate sites, both on Wahluke Slope. The Coyote Bait Can is **Description:** located southeast of 100F area and northeast of the Hanford Townsite. A large military

ammunition box was partially buried at this site. The lid of the box was marked "BAIT CAN." Evidence in the area suggest that it was once used to store bait for coyote trapping. The Coyote Bait Station is east of the bait can, near the eastern edge of the wildlife area. At this location, over 50 coyote skulls were counted. Large animal bones in the area indicated that a poisoned carcass was used. Reports from past residents tell of a trapper who would frequently poison a horse carcass to kill coyotes for the pelts. Bones at this location were old and may predate government

control of the land.

Site Code: 600-91 Classification: Accepted

Site Names: 600-91, Wahluke Slope Gravel Pit #47, Pit ReClassification: Rejected (1/30/2003)

47

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The site is made up of two apparently active gravel pits. The smaller pit has been used as a

Description: disposal area.

Waste Type: Misc. Trash and Debris

Waste The debris at this site included building materials, glass bottles, tin cans, paint cans, cable, concrete, oil cans, and other garbage in the far pit. There was a significant amount of oil

contaminated soil.

Site Code: 600-92 Classification: Accepted

Site Names: 600-92, Wahluke Slope Gravel Pit #56, **ReClassification:** Rejected (1/30/2003)

Borrow Pit #56, Pit 56

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Inactive End Date:

Site On Wahluke Slope, north-northwest of 100D Area and north of Highway 24. The site consists of

Description: several pits.

Waste Type: Demolition and Inert Waste

Waste **Description:** Debris included communications wire, timbers, bottles, cans, barbed wire fencing, and fence posts. Potentially hazardous items identified included one 5-gallon (19 L) can full of dead

beetle (possible herbicide/insecticide) and two 5-gallon (19 L) oil cans with liquid.

600-93 **Site Code: Classification:** Accepted

Site Names: 600-93, Hanford Firing Range **ReClassification:** Rejected (1/30/2003)

Dumping Area Start Date: Site Type: Site Status: Inactive **End Date:**

Site **Description:** This range was used by the original Hanford Site security force for target practice. A bench has been cut out of the bluff measuring approximately 100 yards long. Some 55 gallon drums were placed at the base of the bluff along the bench to serve as targets. Numerous spent bullets have been found in the target area. A burial trench located west of the firing range contained empty

metal ammunition boxes.

Site Code: 600-94 **Classification:** Accepted

Site Names: 600-94, Wahluke Schoolhouse **ReClassification:** Rejected (1/30/2003)

Site Type: Foundation **Start Date: End Date: Site Status:** Inactive

Site Only the concrete front steps remain to this old schoolhouse. The school structure has been

removed. The steps were apparently preserved because a USGS survey marker is imbedded in the **Description:**

top step. This site is not at the townsite of Wahluke.

600-95 **Site Code: Classification:** Accepted

600-95, Wahluke Slope Bridge Disposal **ReClassification:** Rejected (1/30/2003) **Site Names:**

Area, Bridge Overlook Site

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

The site consisted of two separate areas, both of which were littered with old lumber and lesser Site amounts of glass and metallic debris. All debris was removed. Geophysical surveys found four **Description:**

anomalies indicative of metal debris buried within 5 ft (1.5 m) of the surface at the larger of the

two sites and no anomalies at the smaller site.

Waste Type: **Demolition and Inert Waste**

Waste Debris at this site included building materials, wood, glass, wire mesh, and paper products. Trash includes items that appear to be of military origin such as tooth brushes, razors, bottles, **Description:**

cans and military oil cans

Site Code: 600-104 **Classification:** Accepted

600-104, USBR, USBR 2,4-D Burial Site, **ReClassification:** Deleted From NPL (7/8/1998) **Site Names:**

USBR-2.4-D

Site Type: Burial Ground Start Date: 1966 Site Status: Inactive End Date: 1967

Site The 2,4-Dichlorophenoxyacetic acid (2,4-D) disposal site is approximately 122 meters (400 feet)

Description: by 18.3 meters (60 feet). It had been posted on the north and south ends with signs that read "2,4-

D Burial Site, June 1966." The sand dune and disposal site have been stabilized with native

grasses and shrubs.

Waste Type: Chemicals

Waste In 1966, 2,4-D contaminated soil was generated from leaking storage tanks at a USBR Station in

Description: Eltopia, WA. The burial consisted of 900 gal of 2,4-D that had leaked into 50 cu yd of soil. A second burial in 1967 consisted of the ten leaking tanks themselves, which were flattened and

buried in the same location.

Site Code: 600-154 Classification: Rejected (1/27/1998)

Site Names: 600-154, Remains of Windmill, RCRA **ReClassification:**

General Inspection HIRIV-FY96 Item #6

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The site is the remaining parts from an old windmill. The windmill was constructed of sheet

Description: metal and steel. An abandoned well was observed approximately 90 meters (295 feet) southwest

of the windmill.

Waste Type: Equipment

Waste The waste is parts from an old windmill which was constructed of sheet metal and steel.

Description:

Site Code: 600-229 Classification: Rejected (1/27/1998)

Site Names: 600-229, RCRA General Inspection **ReClassification:**

200WFY97 Item #21 Historic Disposal Site, Dumping Area Near White Bluffs

Ferry Landing (East Side)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site contains seven empty rusty 19 liter (5 gallon) steel containers that are partially buried or

Description: filled with soil. The site also contains wire, wire rope, and small amounts of sheet metal.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Seven empty rusty 19 liter (five gallon) steel containers were found at the site. The containers

Description: are partially buried.

Waste Type: Misc. Trash and Debris

Waste The site contains a relatively small amount of metal such as wire rope, barbed wire, wire, and

Description: sheet metal.

100-IU-4

Site Code: 600-105 Classification: Accepted

Site Names: 600-105, SDBDL, Sodium Dichromate ReClassification: Closed Out (2/12/1996)

Barrel Disposal Landfill

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1945

Site The site contained approximately 5000 crushed 55 gallon drums. The 1993 Sodium Dichromate **Description:** Expedited Response Action removed the crushed barrels. A site visit by Roger Carpenter in 1996

identified a few empty 55 gallon drums on a pallet near well #6-91-46A

Waste Type: Barrels/Drums/Buckets/Cans

Waste The wastes disposed of at this site were empty, crushed drums containing sodium-dicrhomate **Description:** residue. It is estimated, assuming that 1% of the original quantity of sodium dichromate

residue. It is estimated, assuming that 1% of the original quantity of sodium dichromate remained in the drum on disposal, that 30.9 tons of sodium dichromate were disposed. The sodium dichromate was used for water treatment in the 100 Areas. This disposal technique was

used only once at this site.

100-IU-5

Site Code: 600-106 Classification: Accepted

Site Names: 600-106, WBPAC, White Bluffs Pickling **ReClassification:** Closed Out (2/12/1996)

Acid Cribs, White Bluff Pickling Acid Cribs

Site Type:CribStart Date:1943Site Status:InactiveEnd Date:1945

Site The site is located west of 100-F Area, south of the intersection of Route 2 North and Federal **Description:** Ave. The site consists of two cribs located side by side. The western crib is 200 feet by 45 feet

with a 3 foot diameter riser pipe. The eastern crib is 225 feet by 50 feet. Vent pipes protrude from the surface of each crib at 7 to 9 foot intervals. The surface was covered with large cobbles.

Waste Type: Chemicals

Waste The site was used to dispose spent pickling acid used to pickle galvanized piping for use in the reactor buildings during construction. The process used several thousand gallons of nitric and

hydrofluoric acid. Generally, the acid was neutralized prior to disposal, but may not have been completely neutralized prior to disposal. Chromium was also identified as a contaminant of

concern.

100-IU-6

600-3 Accepted **Site Code: Classification:**

600-3, Hanford Townsite Excess Material **ReClassification: Site Names:**

Storage Yard/Paint Pit

Dumping Area Start Date: Site Type: Site Status: Inactive **End Date:**

The site consists of a shallow trench that appears to be an old borrow pit, approximately 37 by 27 Site **Description:** by 1.2 meters (120 by 90 by 4 feet), and a dumping area spread out over an area approximately

> 280 by 490 meters (925 by 1,600 feet). Both the dumping area and pit show signs of an attempt to cover the waste, with bulldozer tracks being prevalent throughout the areas. The site also

shows evidence of burning.

The remains of an old railroad spur are present at the approximate center of the site. This spur

traverses the site in an east-west direction.

Vegetation, such as grasses and rabbitbrush can be found at the dumping area. However, there are some smaller areas throughout that have stressed vegetation ranging from very little to none.

Waste Type: Misc. Trash and Debris

Waste Dried paint and paint cans can be found on the south side of the pit. Closure rings for 208-liter (55-gallon) drums, roofing paper, and a white fibrous substance suspected of being asbestos are **Description:**

also present. The dumping area contains various solid wastes that include, broken wet cell battery cases and plates, stainless steel pipe and materials, various sizes and types of containers (three which are labeled as containing ethylene glycol), machining operations cuttings, pieces of

aluminum, pieces of galvanized sheet, burnt wood, and the remains of dry cell batteries.

Site Code: 600-20 **Classification:** Accepted

600-20, Tank Cleaning Site, 615 Hot Mix **ReClassification:** Rejected (10/1/1997) **Site Names:**

Plant For Road Materials

Site Type: Depression/Pit (nonspecific) **Start Date:**

Site Status: End Date: Inactive

The site was originally described as two abandoned asphalt tanks, each with a volume capacity of Site 45,420 to 52,990 liters (12,000 to 14,000 gallons [based on the exterior measurements provided **Description:**

in WHC-MR-0425]). A 1999 waste site walkdown identified several valve pits, and a depression which contains discarded asphalt material, several pails and drums. Waste asphalt, dumped in solid and liquid form, is prevalent at the site, as is other construction and equipment debris. In warm weather, the discarded asphalt liquefies and resembles puddles. The asphalt puddle in the depression (trench) south of the tank area was approximately 0.3 meters (1 foot) deep in May and

June 1999.

Waste Type: Oil

The remaining waste is located in the pit. The floor of the pit is coated with asphalt. Waste

Description:

Site Code: 600-23 Classification: Accepted Site Names: 600-23, Dumping Area Within Gravel Pit ReCl

#11, Pit 11

ReClassification: Interim Closed Out (11/30/2001

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site

The site has been remediated and closed out.

Description:

The waste site was an area of buried debris inside a large gravel pit (WIDS site code 600-248). The majority of the waste was located in the southern portion of a terrace, which was at the west end of the gravel pit, south of the entrance road.

Construction Debris

Waste Description:

Waste Type:

The middle terrace at the west end of the unit contained construction debris. Based on interviews with Hanford employees, drums, construction debris, laboratory equipment from 1706 KE and large pieces of equipment from the 300 Area may have been buried at the site. It had been indicated that the equipment was located on the east edge of the pit. It was possible that some asbestos may have been present. Some of the material disposed of here may have been radiologically contaminated. The contents of the drums were not known.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Barrels, most of which were empty, were present at the face of the terrace.

Description:

Waste Type: Asbestos (non-friable)

Waste

Transite building siding was observed at the site.

Description:

Site Code: 600-24 Classification: Accepted

Site Names: 600-24, West P-11, H-21 Anti-Aircraft

Artillery Compound and Dump Site

ReClassification: Rejected (10/1/1997)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

The site shows evidence of several former building foundations and walkways located along both sides of the roadway. A 20 foot wide by 36 foot wide concrete pad exists with concrete cradles for a large (approximately 30 x 8 foot radius) water tank. A well # 64-27, A-5295 BNW, is located in the concrete pad. Metal water pipes are visible at most building sites. Multiple small dumping sites are evident northwest and northeast of the compound, but none could be located that exhibit more than a small scattering of debris. Lesser amounts of debris are located at a site 100 meters southeast of the end of the paved road. An ammunition case is also located here. A coal pile site exists on the east shoulder of the railroad tracks northwest of the compound, and a large pile of military barbed wire fence posts (screw type) is located west of the tracks. The remains of building debris may be found throughout the area, especially in northeast portion of the site.

site.

Waste Type: Misc. Trash and Debris

Waste The waste at this unit includes: foundations, pipes (above and below grade), paint cans, a pile of

Description: army fence posts, antifreeze cans and miscellaneous debris.

Site Code: 600-26 Classification: Accepted

Site Names: 600-26, Hanford Townsite Burn Pile ReClassification: Rejected (10/1/1997)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site Description:

The Technical Baseline Report states the site consists of a 2.4 meter (8 foot) excavation containing a construction refuse burn pile. However, it also states that the author was unable to

locate the site in the field.

This site was originally identified as a "mystery site" by Richard Roos. In his field notes, Roos describes the site as "old burn pile, apparently a construction disposal location. Site is graded off, perhaps 8' below original grade." He then goes on to describe various features north of the site, such as 600-20 (The Tank Cleaning Site) and several gravel pits. Under "Unusual or Identifying Features," Roos lists "very large spikes (10" x 1/2"), molten glass and metal, wood ashes. A dump site for concrete building foundation is located behind the soil mound..." The site is described as being east of this soil mound. This soil mound with the concrete chunks on its west side is easy to find and can be seen from Highway 2 North. The mound is found in a large excavated area. The excavation was made into the side of a slope and is not a typical borrow or gravel pit. It increases in depth from east to west. The area east of the soil mound and within the excavated area appears to coincide with Roos' description. However, there appear to have been several areas of burning, not just a single burn pile. The spikes, molten glass and wood ashes described by Roos were found in this area during the June 1999 visit.

Waste Type: Misc. Trash and Debris

Waste Unit wastes include construction debris and possible asbestos and barrels.

Description:

Site Code: 600-27 Classification: Accepted

Site Names: 600-27, Well DC-6, Well 699-50-18C, 6- ReClassification: Rejected (10/6/1997)

54-18A, A8855; 6-54-18B, A8856; 6-54-18C, A8857; 6-54-18D, A58858, Water Supply Valve Pits, Foundations and

Dumping Area

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description

Description:

The site contains wells, valve pits, foundations, and a dumping area. The site has four monitoring wells identified as follows: 6-54-18A, A8855; 6-54-18B, A8856; 6-54-18C, A8857; 6-54-18D, A58858. Note that 6-54-18C is an alias for 699-54-18C. The second identifier beginning with an alpha character is a barcode value located on all wells that are presently used by the samplers during the collection of samples and groundwater elevations.

The well named 699-50-18C, DC-6 does not exist either in the Hanford Environmental Information System (HEIS) database or in historical well documents. Two ex-Basalt Waste Isolation Project (BWIP) personnel were also consulted about this well. Both persons stated that the well does not exist and that the picture shown in the Technical Baseline Report is not an old BWIP well.

The two other sites that were previously identified as "wells" (see photograph in the Technical Baseline Report) are likely to be valve pits for water utilities and are marked with four steel posts surrounding the pits. The easternmost pit has been filled in with soil and a concrete structure can

be seen just under the soil. The other pit has a wooden cover and had two water pipes protruding through the cover. One water pipe was approximately 7.6 centimeters (3 inches) in diameter and was open ended. The other pipe was approximately 2.54 centimeters (1 inch) in diameter and had a faucet (garden hose type) attached to the end. In addition, two valve handles also protruded from the wooden cover.

Two power poles were observed between the wells and Route 2 North. The power poles appeared to be active and the breaker switches were not locked out.

Evidence of former buildings shows up between the well house and Route 2 North. Building debris includes concrete footings, concrete pads, transite, sewer pipe, electrical wiring and a large diameter clay pipe approximately 0.77 meters (30 inches) in diameter buried vertically from the surface to approximately 2 meters (6.5 feet) below grade. The clay pipe has no incoming/outgoing pipes.

The area surrounding the wells show evidence of former roads and walkways that have been overgrown with weeds.

Waste Type: Misc. Trash and Debris

Waste Description:

The original waste site package identified that chemical analysis of the monitoring well shows volatile organics. No evidence has been found to support this claim. In order to substantiate this information, the HEIS database was searched for groundwater monitoring wells near the area. The following wells were searched for volatile organics: 699-54-18E, 600-54-19, 699-52-18A, 699-52-18B, 699-52-18C, 699-52-19, 699-52-17, 699-54-18A, 699-54-18B, 699-54-18C, 699-54-18D, 699-54-15A. The results are as follows: Well Number 699-54-18D, Sample Number B07Q48, Date 11/24/92, Constituent 67-64-1, Acetone, 190 micrograms per liter; Well Number 699-54-18D, Sample Number B075S7, Date 11/17/92, Constituent 108-88-3, Toluene, 6.1 micrograms per liter; Well Number 699-54-18D, Sample Number B07Q48, Date 11/24/92, Constituent 108-88-3, Toluene, 5.69 micrograms per liter; Well Number 699-54-18D, Sample Number B01NN6, Date 11/24/92, Constituent 108-88-3, Toluene, 5.2 micrograms per liter. HEIS for Well 699-48-18 was searched for volatile organics. The results are for Sample Number H000DQT1, Date 8/25/87, Constituent 75-09-02 methylenechloride, analytical method id = 16, 80 micrograms per liter. A later sample for the same well showed Sample Number B08185, Date 1/28/93, Constituent 75-09-02 methylenechloride, analytical method id = 83, 5 micrograms per liter (below minimum detectable concentration). Other wells had no volatile organics or the results were below minimum detectable concentration. Some asbestos transite is visible in the area.

Site Code: 600-50 Classification: Accepted

Site Names: 600-50, Hanford Construction Camp Coal ReClassification: Rejected (10/1/1997)

Yard

Site Type:Depression/Pit (nonspecific)Start Date:1943Site Status:InactiveEnd Date:1945

Site Description:

The site is the remnants of the coal pile that supplied coal to the Hanford Construction Camp residents. The "charred black debris" (described in the previous version of the site description) is the 50 year old remnant bottom layer of coal dust from the pile. There are man made mounds on the northeast corner of the site. Previous documentation describes the mounds as thought to contain waste construction materials, such as, wood, bricks, melted plastics and ceramics. However, the man made mounds were created when the surface was bulldozed in preparation for the coal pile. No waste materials are in evidence.

Waste Type: Misc. Trash and Debris

Waste The waste is coal dust remaining from the coal that was stored at the site.

Description:

Site Code: 600-107 Classification: Accepted

Site Names: 600-107, 213-J&K Cribs, Gable Mountain **ReClassification:**

Plutonium Storage Vault Cribs, 213-J & K

Cribs

Site Type:CribStart Date:1944Site Status:InactiveEnd Date:1950

Site The sites consist of two small cribs located on the southwest and southeast corners of the 213-J &

Description: K Storage Vault Facility. The cribs are not marked or posted. There is some evidence of a

demolished crib on the southwest corner of the vaults.

Waste Type: Water

Waste Very little water solution ever entered this unit. The distributor piping was removed and **Description:** Inspected. Rust scale taken from the interior of the pipes was found to be free of radioactivity

background levels. The unit was removed from radiation zone status on November 11, 1974.

Site Code: 600-108 Classification: Accepted

Site Names: 600-108, 213-K Vault, 213-J&K Vaults, ReClassification:

213-J&K Storage Facility (SF), 218-E-16, 213-J & K Magazine Waste Storage Cavern, 213-J & K Storage Facility

Site Type: Storage Start Date: 1944

Site Status: Inactive End Date:

Site This site refers to the 213-K Vault. The other half of the facility is the 213-J Vault, used by PNNL

Description: for storing soil samples. Both vaults have been released from radiation zone status.

The 213 facility was constructed into the south side of the base of Gable Mountain. The vaults are two parallel reinforced concrete, earth covered storage facilities. The south end of each vault forms a continuous reinforced concrete wing-shaped retaining wall with an attached reinforced concrete loading platform. Distance between the two vaults is 13.6 meters (44.5 feet). Each vault contains three rooms: magazine, vestibule, and instrument room. There are two outside, steelhinged doors opening onto the loading platform. An inner steel vault door separates the vestibule from the magazine. The 213-J Vault is the western vault. The 213-K Vault is the eastern vault.

Waste Type: Equipment

Waste The vaults were originally constructed for storage of Hanford plutonium product in containers.

Description: They were used only briefly, (1944-1947), for that purpose. They were subsequently used to

store explosives, ammunition and drums of equipment contaminated with radioactive sodium. Dose rates up to 5 millirad/hour were measured inside 213-K, on the drums containing sodium contaminated equipment (10/21/1981). No smearable radioactivity was detected on any of the surfaces inside the vaults. All contaminated materials have been removed from the 213-K Vault. It is now empty. Both the 213-K and 213-J vaults have been released from radiation zone status. A site evaluation done in May 2003 identified asbestos, lead and mercury concerns.

Site Code: 600-109 Classification: Accepted

Site Names: 600-109, HTCL, Hanford Trailer Camp **ReClassification:**

Landfill

Site Type:Sanitary LandfillStart Date:1943Site Status:InactiveEnd Date:1945

Site The site is found within what is currently named Pit 15. Surface markings suggest that materials

Description: have been covered by bulldozing with excavation spoil. Visible debris is widely scattered within

the pit. A large pile of river rock is located in the central part of the excavation.

Waste Type: Misc. Trash and Debris

Waste The unit was used for typical domestic wastes that were used during construction of the Hanford Description: Site facilities. Debris includes metal, glass, fabric and rubber. Nondomestic metal scrap, rebar

and concrete is also present.

Site Code: 600-110 Classification: Accepted

Site Names: 600-110, HTL, Hanford Townsite Landfill **ReClassification:**

Site Type:Sanitary LandfillStart Date:1850Site Status:InactiveEnd Date:1943

Site The site consisted of an unlined excavation.

Description:

Waste Type: Misc. Trash and Debris

Waste The site was used to dispose of normal industrial and domestic wastes common for the period.

Description:

Site Code: 600-111 Classification: Accepted

Site Names: 600-111, P-11 Critical Mass Laboratory **ReClassification:**

Crib, 116-F-6

Site Type:CribStart Date:1949Site Status:InactiveEnd Date:1951

Site The site is the location of a demolished facility and crib that may have remaining soil

Description: contamination. These facilities were called the P-11 Critical Mass Laboratory. The facility, crib,

and underground piping were decontaminated and demolished in 1974. It is not evident from reading the facility cleanup plan or the final summary document that all of the concrete foundation of the 120 Building was removed. The foundation of the uncontaminated 123 Building does

remain below grade.

Waste Type: Soil

Waste The site received low-level plutonium waste from the 120 Building (Critical Assembly Room, **Description:** Chemistry Laboratory, Storage and Tank Room, and Change Room). The 120 Building and th

Chemistry Laboratory, Storage and Tank Room, and Change Room). The 120 Building and the crib were demolished in 1974. The waste removed from the site during decontamination and demolition activities consisted of seven transuranic waste boxes, fiberglassed plywood and steel, that were buried in trench 8 of 218-W-4B (Burial Ground). All non-transuranic waste was

buried in mixed fission product trenches 12 and 14 in 218-W-4A. The seventeen drums of transuranic waster were buried in trench 7 of 218-W-4B.

The details are 268 - 208 liter (55 gallon) drums, mixed fission products, weighing 50,770 kilograms (111,695 pounds); 17 - 208 liter (55 gallon) drums, transuranic waste, weighing 3,809 kilograms (8,380 pounds); 5 - fiberglass reinforced plywood boxes, weighing 2,600 kilograms (5,200 pounds); 73 - plywood boxes, weighing 124,682 kilograms (274,300 pounds); 2 - steel boxes, weighing 5,009 kilograms (11,020 pounds); 6 truck loads, 8,364 kilograms (18,400 pounds). A total of 10,909 kilograms (24,600 pounds) were buried as transuranic waste and 183,816 kilograms (404,395 pounds) were buried as mixed fission products.

Nontransuranic waste was based on a waste burial limit of 10 nanocuries per gram. This limit was determined by radiation monitoring personnel. These low level wastes were designated as mixed fission products and thus, did not require containment for 20 year retrievability.

Site Code: 600-149 Classification: Accepted

Site Names: 600-149, Small Arms Range, Rifle and **ReClassification:**

Pistol Range, 661 Complex, 600-54

Site Type:Military CompoundStart Date:Site Status:InactiveEnd Date:

Site Field surveillance activities conducted June 17, 1996 at the site revealed several 19 or 23-liter (5

or 6-gallon) drums (riddled with bullet holes), smoke grenade canisters (discharged and bullet riddled), bullet casings, suspected moving target devices, and concrete pads to the west of the site. Additionally, the site is demarcated by a wood post and barbed wire enclosure. The enclosure fenced three sides of the range and appeared to have been posted with warning signs. The signs, however, are no longer readable and consist of rectangular wooden postings attached to some of the remaining wooden fence posts. The fence appeared to be open on the hillside. Much of the fence is down and some of the wire sections have been removed leaving the posts standing. Portions of the old irrigation canal, at the base of the hillside, have been filled with soil apparently to give access to targets placed on the hillside. Rubble, wire, and transite pipe are scattered about the site.

Waste Type: Ordnance

Waste Lead bullets and spent cartridges are found throughout the area. Grenade canisters have also

Description: been found in the area.

Waste Type: Asbestos (non-friable)

Waste The site contains transite piping remnants.

Description:

Description:

Waste Type: Misc. Trash and Debris

Waste The site contains miscellaneous trash scattered about the site.

Description:

Site Code: 600-153 Classification: Rejected (5/31/2001)

Site Names: 600-153, Dumping Area Between River ReClassification: Mile Markers 29 and 30

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The site is pre-Hanford debris, such as a metal strong box, car springs, broken dishes, barbed

Description: wire, and wood.

Waste Type: Misc. Trash and Debris

Waste Observed debris includes a metal strong box, car springs, culvert, piping, wire, barbed wire, old

Description: piping, glass, broken dishes, metal culvert and wood.

Site Code: 600-168 Classification: Rejected (10/1/1997)

Site Names: 600-168, Buckholdt Ranch Toilet Pits,

Herriford Ranch Toilet Pits

ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date:

Site Status: Inactive End Date: 1943

Site The general area of the ranch is marked by several acres of orchard tree stumps visible from the **Description:** highway (Route 2 North). The site contains a number of toilet pits (outhouse pits) that remain

open.

The toilet pits were described as being located between the house foundation and the road to the south. The ground in this area is very uneven and has a rolling surface. During the June 1999 visit, it was observed that much of the southern end of the orchard east of the house foundation has the same undulating ground surface. Several hazards are found near this site, including the house foundation, a wood-lined pit on the north side of the foundation, and the former well or pump house near the south side of the site.

Site Code: 600-169 Classification: Rejected (10/1/1997)

Site Names: 600-169, Hanford Construction Camp **ReClassification:**

Trenches

Site Type:TrenchStart Date:Site Status:InactiveEnd Date:

Site The site is three trenches located south of the Hanford Construction Camp, along the gravel road that is an extension of Avenue A. Each trench runs northwest to southeast and parallels the road.

Spoil piles are pushed to the west side of the trenches. Their purpose is unclear. A 1997 site visit observed a pile of broken concrete between the southern most trench and the adjacent trench

Site Code: 600-178 Classification: Accepted

Site Names: 600-178, 213-J and 213-K Guard House ReClassification:

Toilet Pit

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Inactive End Date:

Site The site is a toilet pit opening within a 4.3 by 4.9-meter (14 by 16-foot) concrete pad that is the

Description: remains from the guard house. Apparently the opening is to a sanitary sewage pit located beneath

the pad. No evidence of a sewage distribution system (septic tank) is apparent.

Waste Type: Sanitary Sewage

Waste The waste was human sewage.

Description:

Site Code: 600-185 Classification: Accepted

Site Names: 600-185, Hanford Construction Camp ReClassification: Rejected (10/1/1997)

Honey Dump Site

Site Type:TrenchStart Date:1943Site Status:InactiveEnd Date:1945

Site The site is described as a dumping and cleaning station for the portable toilets used at the various

Description: Hanford construction sites.

Waste Type: Sanitary Sewage

Waste The unit received portable toilet cleaning chemicals and human waste.

Description:

Site Code: 600-186 Classification: Accepted

Site Names: 600-186, Hanford Construction Camp ReClassification:

Septic Tanks and Sewage Treatment Plants

Site Type: Trench Start Date: 1944

Site Status: Inactive End Date:

Site This waste site includes all the septic tanks as well as the sewage treatment plants at the Hanford **Description:** Construction Camp. Five components of this site have been identified in the field and mapped.

Three former sewage treatment plant sites were identified from basins that remain at the sites. The northernmost site is the largest and deepest and appears as a trench. The trench begins at a group of trees and extends to the river, cutting into the river bank. Small pieces of concrete, concrete pipe, vitrified clay pipe and wood were observed around the trench. The bottom of the trench has fine soil that did not appear to be sludge derived from sewage. The second trench, just south of the first trench is shallower and not as obvious. Small pieces of concrete were observed surrounding the trench. A layer of sludge like material was observed on the east side of the trench. The southernmost trench, was obscured by blown in tumbleweeds. The outline of a foundation was found on the north side of the most southern trench. One septic tank was found between this trench and the turn off to the Honey Dump site. A large area west of the sewage treatment plants was searched for septic tanks, but none were found.

Waste Type: Sanitary Sewage

Waste All sewage carried by the three sewage disposal systems was chlorinated.

Description:

Site Code: 600-192 Classification: Rejected (10/1/1997)

Site Names: 600-192, Hanford Construction Camp **ReClassification:**

Fumigation Chamber

Site Type:Maintenance ShopStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is the remains of a fumigation building. During a field investigation by T. F. Johnson on October 24, 1996, there was no evidence of the fumigation chamber at the site except for a few small pieces of concrete. The area was covered with cheatgrass, rabbitbrush, and tumbleweeds.

The fumigation chamber (disinfestation building) was a small wooden frame building, It was posted with "Poison Gas, Keep Out" signs and protected by an 2.4 meter (8 foot) barbed-wire security fence.

Site Code: 600-202 Classification: Accepted

Site Names: 600-202, Hanford Townsite Four Burn and **ReClassification:**

Burial Pits

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site Description:

The site includes four burn and burial pits located close together and arranged to form a single rectangle that lies in the northwest to southeast direction. Each rectangle is 150 meters (492 feet) by 75 meters (246 feet) by 6 to 12 meters (20 to 39 feet) deep. The total area is provided for the site dimensions.

The site was visited on June 2, 1999. The southwest pit appeared to be partially backfilled. Two metal pipes (approximately 5 centimeters (2 inches) in diameter) with valves extended into the southeast pit from the east side, or river side, of the pit. The pipes are located near the top of the pit. No pipes could be seen extending from the riverbank, but they may have been obscured by vegetation.

Waste Type: Misc. Trash and Debris

Waste Description:

The waste is miscellaneous trash and debris and includes such items as fire-cracked rock, glass, china, jars, bottles, metal, kitchen materials, broken toilet bowl, and other materials. Bulldozer marks suggest that debris has been covered. The pits vary in depth, apparently because of varying levels of backfill. There is the potential that paints and solvents were burned in the pits. The site needs further evaluation.

Site Code: 600-204 Classification: Accepted

Site Names: 600-204, Hanford Townsite Burn and ReClassification: Interim Closed Out (9/16/2003)

Burial Trench

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site was a long, narrow trench that was used as a burn pit. The trench was oriented north to south.

50 00011.

Waste Type: Misc. Trash and Debris

Waste The trash was miscellaneous debris, including metal and glass fragments, nails, fire-scarred rock,

Description: cans, and bottles. The waste has been placed in a discernible unit.

Site Code: 600-205 Classification: Accepted

Site Names: 600-205, Hanford Townsite Landfill 2 **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a large area that appears to have been used for dumping of domestic refuse during an

Description: early time period, probably pre-1944. The exact boundaries are unknown.

Waste Type: Misc. Trash and Debris

Waste The waste is domestic debris, including heavy concentrations of tin cans, bottles, auto parts, and other domestic refuse. Bulldozing marks are evident, and it appears that landfill debris has been

covered over and that additional concentrations may exist below grade.

Site Code: 600-206 Classification: Accepted

Site Names: 600-206, 101 Building Graphite Dump Site ReClassification: Rejected (10/1/1997)

Site Type:Burial GroundStart Date:1943Site Status:InactiveEnd Date:1945

Site The site is a burial ground used for the disposal of scrap graphite and building rubble. The

Description: building was plowed into the ground when it was demolished. Remnants of the site remain on the

surface. The 101 Building was used during the 1943-1944 construction program for machining graphite for the 100 Areas. It was then declared surplus and partially dismantled. It was

reconstructed for machining graphite in 1948.

Waste Type: Demolition and Inert Waste

Waste The records appear to indicate that the site received debris from the demolished building. It is **Description:** unlikely to contain hazardous or radioactive materials. A records review and site inspection

reveal no evidence of radioactive or toxic dumping.

Site Code: 600-207 Classification: Accepted

Site Names: 600-207, Hanford Construction Camp ReClassification: Rejected (10/6/1997)

Powerhouse Ash Pile

Site Type:Dumping AreaStart Date:1943Site Status:InactiveEnd Date:1945

Site The site is a large coal ash pile. The pile is pear-shaped and oriented north to south with the

Description: wider portion to the south. It is covered with cheatgrass and tumbleweeds. A second smaller ash

pile exists to the northwest.

Waste Type: Ash

Waste The waste is ash that appears characteristic of powerhouse ash and probably came from coal

Description: fired power houses used at the Hanford Construction Camp. The dirt road leading to the main

site has been overlaid with ash. The waste has been placed in a discernible unit (pile).

Site Code: 600-208 Classification: Accepted

Site Names: 600-208, Hanford Construction Camp ReClassification:

Boiler House Ponds

Site Type:PondStart Date:Site Status:InactiveEnd Date:

Site Description:

The site was the liquid disposal ponds that received waste water and chemicals from boiler houses (also called steam plants or power plants) used at the Hanford Construction Camp to generate steam for building heat. These ponds or trenches, referred to as Liquid Seep Ponds, are believed to have existed at each fixed boiler house and to have received "industrial and commercial" waste common to the period. The pits (ponds) are evident at most boiler house sites. They are now filled with wind-blown debris and tumbleweeds. They are unlined and without foundation or side walls.

During June 1999, eight of the eighteen ponds were located in the field. At least one of the ponds had been filled with large rocks. Others appear to have been used for the disposal of debris and later backfilled.

Waste Type: Water

Waste The waste was waste water and chemicals. The chemical released most frequently to the ponds

Description: would have been "water softener brine". There are no obvious signs of contamination.

Site Code: 600-213 Classification: Accepted

Site Names: 600-213, Hanford Airport Underground ReClassification:

Fuel Storage Tanks

Site Type: Storage Tank Start Date:
Site Status: Inactive End Date:

Site Description:

The site is underground fuel storage tanks that were associated with the Hanford Airport. The airstrip runways are still visible. A windsock pole is visible just off the southeast corner of the airstrip intersection.

Two field walkdowns have been performed for this site looking for visual evidence of underground fuel storage tanks and service building locations. No visual evidence of building locations or fuel storage tanks was observed.

A United States Geological Survey (USGS) June 1, 1948 aerial photograph of the area shows a connecting taxi-way between the south end of the north-south runway and the east end of the east-west runway. The photo shows buildings on the southeast side of the taxi-way. The taxi-way has a large north arrow painted on it that is about 61 meters (200 feet) long.

Site Code: 600-239 Classification: Accepted

Site Names: 600-239, Debris in Pit 16, Hanford ReClassification: No Action (5/31/2001)

Aggregate Pit Debris, 615 Hot Mix Plant

Debris

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

The site contains several large wooden beams, wooden pallets, large diameter steel pipe, steel plates, large mesh steel screens and rubber tires. All wastes observed were lying in neat piles on the ground surface within Pit #16; none appeared to be partially buried. One stacked pile of metal posts had some radiation warning signs still attached. There is a spot of old paint, about one square foot, in the pit.

The site is naturally revegetating, with the sides regrowing grasses and rabbitbrush but the bottom still mostly barren.

Waste Type: Misc. Trash and Debris

Waste The waste is wood, metal and rubber.

Description:

Site Code: 600-240 Classification: Accepted

Site Names: 600-240, Debris in Pit 17, Hanford ReClassification: Rejected (5/31/2001)

Aggregate Pit Debris, 615 Hot Mix Plant

Debris

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

The site is metal and wooden debris scattered within Gravel Pit #17. The debris originated from the 615 Hot Mix Plant and operation of the gravel pit (Hanford Aggregate Pit). Some of the pipes

the 615 Hot Mix Plant and operation of the gravel pit (Hanford Aggregate Pit). Some of the pipes and wood are partially buried in scattered locations. The pile is naturally revegetating to grasses and rabbitbrush. To the east of the pit is an irregularly shaped pile of a mix of asphalt pieces, soil, gravel, and cobble, about 12 meters by 3.5 meters by 1 meter high (40 feet by 12 feet by 3 feet

high). Rabbitbrush plants have started to colonize the pile.

Waste Type: Misc. Trash and Debris

Waste The waste is metal pipe, coarse mesh screens, wood, sheetmetal, concrete, a rubber tire, and a

Description: pile of asphalt pieces mixed with soil, gravel, and cobble.

Site Code: 600-250 Classification: Rejected (5/31/2001)

Site Names: 600-250, Metal Debris from RCRA **ReClassification:**

General Inspection #LORIVFY97 Item #4

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a recorded cultural resources site, a historic homestead where rusty sheet metal vent

Description: ducting and other miscellaneous debris have been abandoned, including: broken bricks and

concrete, old lumber, metal cables and wiring. Some of the debris extends on to the top of the

bank, including some half-buried, rusty cans.

Waste Type: Misc. Trash and Debris

Waste The waste is sheet metal and other debris.

Description:

Site Code: 600-251 Classification: Rejected (4/10/2002)

Site Names: 600-251, Steel Pipe from RCRA General

Inspection #LORIVFY97 Item #6

ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

the pipe approximately 1.2 meters (4 feet) in length. The reason the pipe is tilted is not known. The pipe appears to be buried in the ground about 20 feet (6 meters) (john Auten, personal communication, December 19, 2001). The pipe is approximately 0.46 meters (1.5 feet) in diameter and has a 1.3 centimeters (0.5 inches) thick wall. The pipe is rusted and is filled with earth inside the pipe up to the level where it enters the ground. A well identification label is attached to its side (B8542). The pipe is covered with a flat metal lid.

The site is a near-vertical (tilted at about 20 degrees) steel pipe with the above ground portion of

Waste Type: Misc. Trash and Debris

Waste The waste is a 40 centimeter (16 inch) diameter steel pipe extending from the ground

Description: approximately 1.5 meters (5 feet).

Site Code: 600-257 Classification: Accepted

Site Names: 600-257, 213-J Vault, 213-J&K Storage ReClassification: No Action (4/11/2002)

Facility, 213-J Magazine Waste Storage

Cavern

Site Type: Storage Start Date: 1944

Site Status: Inactive End Date:

Site This site refers only the 213-J Vault. The 213-K Vault is described in Sitecode 600-108.

Description:

The 213 facility (213-J and 213-K) was constructed into the south side of the base of Gable Mountain. The vaults are two parallel reinforced concrete, earth covered storage facilities. The south end of each vault forms a continuous reinforced concrete wing-shaped retaining wall with an attached reinforced concrete loading platform. The distance between the two vaults is 13.6 meters (44.5 feet). Each vault contains three rooms: magazine, vestibule, and instrument room. There are two outside, steel-hinged doors opening onto the loading platform. An inner steel vault door separates the vestibule from the magazine. The 213-J Vault is the western vault. The 213-K Vault (site 600-108) is the eastern vault and is not part of site 600-257.

Waste Type: Equipment

Waste Description:

The vaults were constructed for storage of Hanford plutonium and were used only briefly for that purpose. No smearable radioactivity or radiation above background was detected inside the 213-J Vault in 1981. 213-J was used by Pacific Northwest National Laboratory (PNNL) to store uncontaminated soil samples collected from around the world from a fallout study. In March 2002, PNNL removed the soil samples from the 213-J Vault. The vault is now empty.

Site Code: 600-272 Classification: Accepted

Site Names: 600-272, Petroleum-Contaminated ReClassification:

Borehole, Well 699-43-2

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site Description:

The site is hydrocarbon contamination in well 699-43-2. Well 699-43-2 is a 16.8-centimeter (6-5/8-inch) diameter well with a 10-centimeter (4-inch) PVC liner. Limited information is available about well construction. This well is believed to have been drilled to a depth of 120 meters (390 feet) in 1980 to support geologic studies for reactor siting. The well is currently 103.4 meters (339 feet) deep. The depth to water is 9 meters (26 feet) below land surface. It is believed that the well is not screened to groundwater and is open at the bottom.

Waste Type: Oil

Waste Description:

The waste is an oil/water matrix. A sample of the water in the well showed 4.5 milligrams/liter (mg/L) of total petroleum hydrocarbons, 12.3 mg/L of oil and grease, and about 360 mg/L (36,000 micrograms per liter) of unknown alkanes. The likely source is diesel fuels or kerosene type materials. The liquid waste matrix will designate as D001 due to its low flash point.

Site Code: 600-280 Classification: Discovery

Site Names: 600-280, Hardened Tar Site ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site

Description:

Site Code: JA JONES 1 Classification: Accepted

Site Names: JA JONES 1, JA Jones 1, JA Jones ReClassification: Interim Closed Out (11/8/2001)

Dumping Pit #1, JA Jones Construction Pit

#1

Site Type:Dumping AreaStart Date:1975Site Status:InactiveEnd Date:1979

Site The site has been remediated and closed out.

Description:

The site originally consisted of a trench dug from east to west, located on the west side of a

depression and used by the J.A. Jones Company.

Waste Type: Construction Debris

Waste This site contains miscellaneous nonradioactive solid wastes from various construction sites. It

Description: contains wood scraps, concrete, miscellaneous construction wastes and paint products.

Waste Type: Chemical Release

Waste In 1977, seven to ten pick up truck loads of over stocked paint and solvents were disposed of **Description:** into a pit located north of the 300 Area. A site visit with the employee who dumped the paint

indicates it was placed in the trench known as JA Jones Pit 1. He indicated that latex, epoxy and enamel paints, as well as paint thinners were discarded. He opened the containers (one and 5 gallon cans) and emptied the contents into the pit. He then threw the empty containers into the

pit.

Waste Type: Misc. Trash and Debris

Waste The site may contain some low level uranium contaminated materials. However, this

Description: information can not be confirmed because of the uncertainty the location where the material was

dumped.

Site Code: UPR-600-11 Classification: Accepted

Site Names: UPR-600-11, Contaminated Soil Dumped ReClassification: Closed Out (1/27/1999)

at JA Jones Pit #1

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The site was an area within the JA Jones Pit #1 where contaminated material was mistakenly

Description: disposed. The contaminated material was removed in 1980 and the area released from

radiological control. There is no visual evidence of this occurrence.

Waste Type: Soil

Waste The waste included soil and blacktop rubble. Surveys of the blacktop rubble revealed

Description: contamination with a maximum reading of 1000 counts per minute. Soil at the dump site had

readings of less than 200 counts per minute. This is believed to be the field instrument detection limit. Blacktop and soil samples (quantity unknown) were collected for a laboratory counting. The blacktop had a maximum reading of 600 counts per minute natural uranium. The soil

ReClassification:

measured at less then detectable.

Site Code: UPR-600-16 Classification: Accepted

Site Names: UPR-600-16, P-11 Fire and Contamination

Spread, UN-600-16, UN-616-16

Unplanned Release Start Date: 1951

Site Status: Inactive End Date:

Site The area is currently a flat, featureless field that has been sown with rye grass. The P-11

Description: Laboratory structure has been removed but its location is marked with a permanent concrete

benchmark.

Waste Type: Ash

Site Type:

Waste An estimated amount of 1 to 4 grams (0.035 to 0.14 ounces) of plutonium was deposited over an

Description: area approximately 1,660 square meters (18,000 square feet) from a structure fire in 1951.

Site Code: UPR-600-18 Classification: Accepted

Site Names: UPR-600-18, Tank Truck Gasoline Spill, ReClassification: Rejected (10/1/1997)

UN-600-18

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The site is an area where petroleum products leaked to the soil from a fuel delivery truck

Description: accident. The release occurred April 16, 1987 9:00 AM and resulted in the spill of CERCLA reportable materials. Appropriate notifications were made to the Department of Energy,

Environmental Protection Agency, State of Washington, and Rockwell (maintenance and

operations contractor) management.

Waste Type: Oil

Waste The release was a total of 1,354 liters (395 gallons) of fuel consisting of 26 liters (7 gallons) of **Description:** #2 diesel oil, 434 liters (112 gallons) of unleaded gasoline, 38 liters (10 gallons) of ethylene

glycol, and 856 liters (226 gallons) of leaded gasoline.

Site Code: UPR-600-19 Classification: Accepted

Site Names: UPR-600-19, Lime Sulfur Barrel ReClassification: Rejected (10/1/1997)

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is an unplanned release. An old wooden barrel that pre-dated MED operations

Description: deteriorated and collapsed, spilling the contents (about 45 kilograms [100 pounds] of powdery

lime sulfur) onto the ground. The site was abandoned when the DeWitt Buckholdt Ranch was

taken over by the U.S. Army Corps of Engineers in 1943.

Waste Type: Chemical Release

Waste The waste is lime sulfur powder. According to regulatory support personnel, lime sulfur is not a **Description:** listed waste. WAC 16-154-100 Materials List for Organic Food Production -- Disease Control

Materials and Practices states the following: "Approved materials. The following list of disease control materials and practices are approved for use in organic crop production. Some approved materials have certain restrictions regarding their use. These restrictions are noted in the list.

Lime sulfur: Foliar application as a fungicide only."

100-KR-1

Site Code: 100-K-57 Classification: Accepted

Site Names: 100-K-57, 107-KE Drainage Ditch **ReClassification:**

Site Type:DitchStart Date:1967Site Status:InactiveEnd Date:1971

Site The site appears as a dry, shallow ditch which extends from the 116-K-3 (1904-K Outfall

Description: Structure) and the 116-K-1 Crib. A second ditch extends from the culvert to the Columbia River.

The culvert conveyed process effluent leakage from the area surrounding the 107-KE Basins under the road and to the ditch. The two ditches intersect below the bank located just north of the basins. The ditch at the bottom of the bank is approximately 300 meters (980 feet) long and 2 meters (6.6 feet) wide and the ditch leading from the culvert to the river is approximately 270 meters (890 feet) long and the width is generally 2 meters (6.6 feet) wide but widens significantly in the middle section. The southern portion of the ditch is located in an area posted as a "Soil Contamination Area." The ditch is barricaded from the river by a three strand barbed wire fence

and is posted with "Keep Out" signs.

Waste Type: Soil

Waste The soil in and around the ditch is contaminated with radionuclides as a result of conveying

Description: reactor process effluent to the river.

Waste Type: Process Effluent

Waste The site received process effluent from the 107-KE Retention Basins when the site was active.

Description:

Site Code: 100-K-63 Classification: Accepted

Site Names: 100-K-63, 100-KW Floodplain, 100-K ReClassification:

Flood Plain Contamination Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is a large portion of the flood plain, along the shore of the Columbia River, north of 100-

Description: K West Reactor Area that is posted as a radiological contamination area. Most of it is posted as

an Underground Radioactive Material Area, but there are two sections that remain posted as Soil

Contamination Areas.

Site Code: 100-K-64 Classification: Accepted

Site Names: 100-K-64, 100-KE Floodplain, 100-KE ReClassification:

Flood Plain Contamination Area

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is the portion of the flood plain, along the shore of the Columbia River, north of 100-K

Description: East Reactor Area that is posted as a radiological contamination area, Soil Contamination Area

and Underground Radioactive Material. It is inside an 8 foot chain link fence. The gate has an

Underground Radioactive Material sign posted on it.

Site Code: 100-K-78 Classification: Accepted

Site Names: 100-K-78, Fenced Contamination Area **ReClassification:**

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site In April 2000, the site was enclosed within a post and chain area and posted with Contamination

Description: Area signs.

Waste Type: Soil

Waste

Description:

Site Code: 100-K-80 Classification: Accepted

Site Names: 100-K-80, 100K River Effluent Pipeline, ReClassification:

100K River Line

Site Type: Radioactive Process Sewer Start Date:
Site Status: Inactive End Date:

Site This site is the old process effluent pipeline (riverline) that extends from the 1904-K outfall in the **Description:** 100K area into the main channel of the Columbia River. Only the west pipeline is included; the

100K area into the main channel of the Columbia River. Only the west pipeline is included; the east pipeline is still used (as of February 2002) as a National Pollutant Discharge Elimination System (NPDES) discharge point by the Spent Nuclear Fuels Program. The riverline is constructed of a 213-centimeter (84-inch) diameter carbon steel pipe with a 1.3-centimeter (1/2-inch) thick wall. The west and east pipelines are parallel lines extending approximately 76 meters (250 feet) into the river. Both pipelines are exposed along most of the run, protruding 0.3 to 0.9

meters (1 to 3 feet) above the riverbed.

Waste Type: Equipment

Waste The waste includes the pipeline and the contaminated scale contained within it.

Description:

Site Code: 100-K-81 Classification: Accepted

Site Names: 100-K-81, Contamination Area West of **ReClassification:**

116-K-3

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site consists of a large cylindrical piece of equipment surrounded by a rope and posted as Soil

Description: Contamination Area.

Site Code: 116-K-1 Classification: Accepted

Site Names: 116-K-1, 100-K Crib, 100-K Pond, 116-K- ReClassification:

1 Trench, 107-K Pond, 107-K(E) Sump,

100-K Emergency Pond

Site Type: Crib Start Date: 1955

Site Status: Inactive End Date: 1956

Site Description:

The unit is a structure within a structure, where the dimensions are 61 meters (200 feet) by 61 meters (200 feet) at the bottom and 122 meters (400 feet) by 122 meters (400 feet) at the top of diked sides. The inner structure rests within a sand-filled excavation that is 3 meters (10 feet) wide at the sides, 3 meters (10 feet) deep (parallel to the excavation) with 0.3-meter (1-foot) of underlying gravel. Both the inner and outer structures have a side slope ratio of 4:1. The 41-centimeter (16-inch) sewer enters 8 meters (27 feet) below top of grade. A 107-centimeter (42-inch) drain line enters north of the 41-centimeter (16-inch) line, and 6 meters (20 feet) below the top of the structure. The natural ground elevation is 406 feet (124 meters) above mean sea level (MSL). An earth dike with a slope ratio of 4:1 surrounds the unit from 2.1 meters (7 feet) below grade (bottom of outer structure) to 8 meters (26 feet) above the natural ground surface (top of structure). A 0.6-meter (2-foot) layer of riprap surrounds the earth dike from natural grade to 3.4 meters (11 feet) above grade.

Waste Type: Process Effluent

Waste The site received reactor coolant water from the 107-K Retention Basins during reactor outages due to fuel ruptures. The site received 107-K Basin cleanout slurry from February 1955 to May

1956.

Site Code: 116-K-2 Classification: Accepted

Site Names: 116-K-2, 100-K Mile Long Trench, K **ReClassification:**

Trench, 116-K-2 Trench, 100-K

Emergency Trench, 107-K Effluent Trench,

Bypass Crib Ditch

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1971

Site The trench was originally 1250 meters (4100 feet) long, 17.2 meters (56.5 feet) wide at the top, 1.2 meters (4 feet) wide at the bottom, and 5.3 meters (17.5 feet) deep. The side slope ratio was

1.2 meters (4 feet) wide at the bottom, and 5.3 meters (17.5 feet) deep. The side slope ratio was 1.5:1. The spoil piles on both sides of the trench originally had a top width of approximately 3.7 meters (12 feet). The site has been backfilled and stabilized using the original spoil piles that were located on either side of the trench. The trench was fed by a 40.6 centimeter (16 inch) pipe

that was part of the retention basin drain system.

Waste Type: Process Effluent

Waste The site received all contaminated effluent from floor drains in the 105-KE and 105-KW

Description: Reactors (low volume) and approximately 1893 liters (500 gallons) per minute of 105-KE and

105-KW Reactors metal storage basin overflow. Until 105-KE and 105-KW shut down around February 1, 1970, an undetermined amount of Retention Basin effluent leaked through 107-centimeter (42-inch) butterfly valves in the tank bottoms. Leakage was estimated at 37,854 to 75,708 liters (10,000 to 20,000 gallons) per minute. The valve leakage showed a history of increase until the 1968 valve and tank renovation. Leakage gradually increased again after these repairs. Other periodic flows included low volume, neutralized, dummy decontamination waste, process-cooling water during charge/discharge; occasional special disposals; and occasional tanks of process cooling water that was collected after a fuel cladding failure. In 1972, a minor construction tractor and hydride tanks removed from 100-K Area facilities were buried in the

trench. In 1978, the radioactive inventory at the site was calculated at 2,100 curies.

Site Code: 116-K-3 Classification: Accepted

Site Names: 116-K-3, 1904-K Outfall Structure, 1908-K ReClassification:

Outfall Structure

Site Type: Outfall Start Date: 1955

Site Status: Active End Date:

The outfall consists of a concrete block with two 84-inch (213.4-centimeter) diameter pipes and an outfall structure with a concrete spillway. The entire structure can be thought of as a transfer

station: effluent could be discharged either by pipeline or spillway to the Columbia River. The concrete block serves as an anchor for the piping system and a foundation for the outfall

structure. The pipelines are underground and extend to the approximate center of the river. The pipelines used to carry reactor effluents and process sewer wastes, but currently are regulated by permit to discharge process wastes (cooling water and water treatment wastes) to the river. The outfall structure, which is 33 feet (10 meters) wide by 35 feet (10.7 meters) long by 23 feet (7 meters) high, is a reinforced concrete water box with a spillway attached. The spillway is 10 feet (3 meters) wide and 225 feet (68.6 meters) long and discharges into an earthen trench to the river. The spillway is covered with backfill and is inactive. The site includes two 2.1 meter (7 feet) diameter discharge pipelines that terminate at the bottom center of the Columbia River main

channel.

Waste Type: Process Effluent

Waste The unit received reactor coolant water from the 107-K Retention Basins. The radionuclide **Description:** content is unknown. The structure also received general area wastes through the concrete box

sewer. The concrete box sewer wastes went into the single chamber of the structure and then

drained into the two pipelines into the river.

Site Code: 116-KE-4 Classification: Accepted

Site Names: 116-KE-4, 107-KE Retention Basins, 107- **ReClassification:**

KE

Site Type:Retention BasinStart Date:1955Site Status:InactiveEnd Date:1971

Site The site consisted of three open top, carbon-steel tanks with steel bottoms. The circular basins **Description:** were 6.1 meters (20 feet) apart. The site is now a gravel field, free of vegetation. Part of the are

were 6.1 meters (20 feet) apart. The site is now a gravel field, free of vegetation. Part of the area that held contaminated pipelines and scrap metal, which were being staged for transportation to

ERDF, is posted as an Underground Radioactive Material area.

Waste Type: Process Effluent

Waste This site received cooling water effluent from the 105-KE Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Eighty percent of the total radionuclide

the internal cooling prior to receive to the Columbia River. Eighty percent of the total radionach

inventory is contained within the soil adjacent to the basin.

Site Code: 116-KW-3 Classification: Accepted

Site Names: 116-KW-3, 107-KW Retention Basin, 107- ReClassification:

KW

Site Type: Retention Basin Start Date: 1954

Site Status: Inactive End Date: 1970

Site The unit consisted of three open-top, carbon steel tanks with steel bottoms. The tanks were 61

Description: meters (20 feet) apart. Decommissioning activities included removal of large steel access plates.

The site was interim stabilized in 1995 and in 1999, when contaminated scrap metal that had been

staged there was disposed to ERDF.

Waste Type: Process Effluent

Waste This site received cooling water effluent from the 105-KW Reactor for radioactive decay and thermal cooling prior to release to the Columbia River. Eighty percent of the total radionuclide

inventory is contained within the soil adjacent to the basin.

100-KR-2

Site Code: 100-K-1 Classification: Accepted

Site Names: 100-K-1, 119-KW French Drain, 119-KW ReClassification:

Exhaust Air Sample Building French Drain,

100-K-45

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The site is a 0.46-meter (1.5-foot) diameter concrete french drain that extends approximately 15 centimeters (6 inches) above the surrounding grade. It has a blue metal cover that is posted with

"Confined Space" and "Surface Contamination" warning signs. A site visit in April 2000 found the area had been covered with cobble and surrounded with posts and chain. A sign reading "116-

KW-1 Storage Basin French Drain is still marking the area.

Waste Type: Water

Waste The unit received heat exchanger cooling water from sample equipment in the 119-KW

Description: Building, wastewater from a swamp-type cooler and effluent from a floor drain also located in

the 119-KW Building.

Site Code: 100-K-2 Classification: Accepted

Site Names: 100-K-2, 118-K-2, 118-K-2 Sludge Burial ReClassification:

Ground, Burial Area

Site Type: Burial Ground Start Date:
Site Status: Inactive End Date:

Site The site has appeared in different locations on several sketch type drawings as a sludge burial

Description: ground. Today, the surface of the site is vegetation-free and covered with soil and rocks. The

surface shows no signs of the waste site.

Waste Type: Sludge

Waste The site is described as having received sludge from the retention basins (107-KE and 107-**Description:** KW). Although an exact inventory for this sludge trench is not available, it is analogous to the state of the state

KW). Although an exact inventory for this sludge trench is not available, it is analogous to the 107-B retention basin sludge trench (116-B-14). Characterization done at the 107-B trench in 1978 found an average concentration of plutonium of 0.7 picocuries per gram and an average beta/gamma concentration of 240 picocuries per gram. The expected radionuclides include

europium-155, cobalt-60, cesium-137, strontium-90 and nickel-63.

Note: DOE/RL-94-61 Appendix K (Draft A), mistakenly lists the average plutonium concentration for the 107-B Sludge Trench (116-B-14) as 0.7 curies per gram. The original report for this sampling activity lists the value as 0.7 picocuries per gram (see UNI-946, page 2-

36).

Site Code: 100-K-3 Classification: Accepted

Site Names: 100-K-3, 1706-KE Fish Pond Heat **ReClassification:**

Exchanger Pit and Pump Pit, Water Studies

Semi-Works

Site Type:Valve PitStart Date:1956Site Status:InactiveEnd Date:1965

Site Description:

This site includes two concrete pits, two concrete manholes, concrete encased pipelines and non-encased pipelines. This site includes those pipelines that were specific to the 1706-KE Water Studies Semi-Works, and does not include the large 0.9-meter (36-inch) or 1.8-meter (72-inch) 105-KE Reactor effluent pipelines.

Heat Exchanger Pit: The Heat Exchanger Pit presently appears as a concrete pad. The structure is entirely below grade. A 1.2 by 3.0-meter (4 by 10-foot) access hatch is located at the south end. Adjacent to the access hatch is a square inlet ventilation pipe. At the north end is an exhaust vent pipe approximately 61 centimeters (24 inches) in diameter. On the west side of the pad, a 7.6-centimeter (3-inch) pipe extends approximately 0.3 meters (1 foot) above the surface of the pad. It is surrounded by a 4.9 by 7.3-meter (16 by 24-foot) yellow wooden fence and a light duty post and chain barricade posted with "Surface Contamination" signs.

Pump Pit: Approximately 9.1 to 12.2 meters (30 to 40 feet) to the east of the Heat Exchanger Pit is a related structure, the Pump Pit, that also appears as a concrete pad. This structure is entirely below grade. The Pump Pit is approximately 2.4 by 2.4 meters (8 by 8 feet), including 15 to 20-centimeter (6 to 8-inch) thick walls. The pump is labeled on H-1-24913KE as PIE (Pile Effluent Water) Pump No. 2. The Pump Pit above-grade structure has been painted and is marked as a "Confined Space".

Pipelines: The main 0.9-meter (36-inch) and 1.8-meter (72-inch) 105-KE Reactor effluent lines have been connected to smaller 0.9-meter (36-inch) diversion pipelines at the Pump Pit and just west of the Pump Pit and inline with the 1.8-meter (72-inch) effluent pipeline. These two pipelines, 7.6 centimeters (3 inches) in diameter from the 0.9-meter (36-inch) pipeline (identified on H-1-24974KE as PIE #2) and 7.6 centimeters (3 inches) in diameter from the 1.8-meter (72-inch) pipeline (identified on H-1-24974KE as PIE #1), enter the Heat Exchanger Pit.

A 2.54-centimeter (1-inch) pipeline leaves the 105-KE Reactor close to the same location as the two main effluent lines and goes directly to the Heat Exchanger Pit. This pipeline is labeled PIEX (Pile Effluent from Experimental Tubes) on H-1-24974KE.

The Heat Exchanger egress pipelines run from the Heat Exchanger Pit to the 1706-KE Building where they enter the 1706-KE Building at the northwest corner of the building. These were the pipelines used to provide raw water and "cooled" process effluent to the fish troughs in the 1706-KE Wet Fish Studies Laboratory (Site: 100-K-52). They are a 20-centimeter (8-inch) raw water pipeline, a 2.54-centimeter (1-inch) PIE pipeline, and a 5.1-centimeter (2-inch) PIEX pipeline.

A 3.8-centimeter (1.5-inch) PIE pipeline and a 5.1-centimeter (2-inch) pipeline leave the Heat Exchanger Pit and run to the Valve Pit at the front of the rectangular Fish Pond (Site: 100-K-4).

Manholes: Two manholes, 1706-KE-1 and 1706-KE-2, are located at the inflections(elbows) in the pipelines running from the Heat Exchanger Pit to the 1706-KE Building. Each (electrical service - H-1-24913KE) manhole is a below-grade concrete-reinforced structure 1.6 meters long by 1.6 meters wide by 2.6 meters deep (4.6 feet long by 4.6 feet wide by 8.6 feet deep). Each manhole has a 15.2-centimeter (6-inch) sump in the bottom filled with 30.5 centimeters (12 inches) of 7.6 to 10-centimeter (3 to 4-inch) field stone below the bottom of the sump. The manholes extend above grade about 15 centimeters (6 inches).

Waste Type: Process Effluent

Waste Description:

Site Code: 100-K-4 Classification: Accepted

Site Names: 100-K-4, 1706-KE Wet Fish Studies Ponds **ReClassification:**

and Valve Pit

Site Type:PondStart Date:1956Site Status:InactiveEnd Date:1965

Site The site is currently identified by two 9.1-meter (30-foot) diameter circular ponds separated by a

Description: 2.7 by 9.1-meter (9 by 30-foot) rectangular pond and valve pit.

All ponds contain drains which presumably discharge to the process sewer that is located in the

vicinity.

Waste Type: Water

Waste A mixture of raw water and heated effluent water passed though the troughs.

Description:

Site Code: 100-K-5 Classification: Accepted

Site Names: 100-K-5, 1705-KE French Drain ReClassification:

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a french drain consisting of a 0.9-meter (3-foot) diameter vitrified clay pipe which

Description: protrudes approximately 0.3 meter (1 foot) above grade and has a heavy wooden cover.

Waste Type: Process Effluent

Waste The site received waste effluent from floor drains, overflows, and drainage from the 1705-KE

Description: Experimental Water Treatment Basin and facilities.

Site Code: 100-K-6 Classification: Accepted

Site Names: 100-K-6, Vacuum Pit, Cyclone Separator, ReClassification:

105-KE Vacuum Pit

Site Type:Process Unit/PlantStart Date:Site Status:InactiveEnd Date:

Site The vacuum pit contains a cyclone separator in a vertically oriented 3-meter (10-foot) diameter

Description: culvert which extends from grade level to 9.2 meters (30 feet) below grade.

Waste Type: Soil

Waste The soil beneath the steam turbine is reported to have been contaminated with radioactive materials and was covered with about 0.3 meters (1 foot) of gravel. The dose rate at the pit

opening on January 20, 1994 was slightly less than 2 millirad/hour, suggesting a higher dose rate

at the pit bottom.

Site Code: 100-K-7 Classification: Rejected (10/1/1997)

Site Names: 100-K-7, 165-KE Ethylene Glycol Tanks,

165-KE-E and 165-KE-W

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The site was two carbon steel underground (positioned horizontally) ethylene glycol storage tanks. One tank contained pure ethylene glycol and the other tank contained a mixture of water and ethylene glycol. The tanks supplied mixed and pure ethylene glycol for injection into process water pipelines to prevent freezing during cold periods. A pair of 10 centimeters (4 inches) fill pipelines led to a street box that contained a 10 centimeters (4 inches) cap. The street box was used for making a connection to railroad tank cars. The street box was just off the edge of a railroad spur.

ReClassification:

Today, the site is gravel covered and no evidence of the site remains.

Waste Type: Chemicals

Waste The waste was tanks that contained ethylene glycol.

Description:

Site Code: 100-K-8 Classification: Rejected (10/1/1997)

Site Names: 100-K-8, 165-KW Ethylene Glycol Tanks, **ReClassification:**

165-KW-E and 165-KW-W

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1970

Site Description:

The site was two carbon steel underground (positioned horizontally) ethylene glycol storage tanks. One tank contained pure ethylene glycol and the other tank contained a mixture of water and ethylene glycol. The tanks supplied mixed and pure ethylene glycol for injection into process water pipelines to prevent freezing during cold periods. A pair of 10 centimeters (4 inches) fill pipelines led to a street box that contained a 10 centimeters (4 inches) cap. The street box was used for making a connection to railroad tank cars. The street box was just off the edge of a railroad spur.

All piping associated with these tanks utilized welded joints with threaded couplings at the top of each tank. The pipelines related to these tanks were: (1) suction line -- 2.54 centimeters (1 inch) outside diameter by 6.1 meters (20 feet) to the building; (2) -- 10.2 centimeters (4 inches) outside diameter by 6.1 meters (20 feet) to the building (165-KW-E [east] tank only); (3) vent line -- 10.2 centimeters (4 inches) outside diameter by 9.1 meters (30 feet) (including the above ground components); (4) fill connection and street box -- 10.2 centimeters (4 inches) outside diameter by 4.6 meters (15 feet) long (empty during normal operation); (5) cross tie line -- 10.2 centimeters (4 inches) by 3.05 meters (10 feet) long (empty during normal operation).

Today, the site is gravel covered and no evidence of the site remains.

Waste Type: Chemicals

Waste The waste was tanks that contained Ethylene glycol. The tanks had been rinsed and flushed

Description: during the shut down of the 105-KW Reactor and did not contain any fluid.

Site Code: 100-K-9 Classification: Rejected (10/1/1997)

Site Names: 100-K-9, 118-KE-2 French Drain (North), ReClassification:

104-K Dry Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is the northernmost of two french drains at the 118-KE-2. The french drain is a 0.6 meters (2 feet) diameter steel pipe with a steel cover. It is gravel filled to grade and surrounded by a yellow wooden barricade. The steel cover is posted with a confined space sign. The adjacent area is covered with gravel and cobbles.

Each side of the 118-KE-2 Horizontal Control Rod Cave floor was sloped towards a drain. The drain was designed to receive rainwater that percolated through the earth berm covering the Rod Cave. The drains helped minimize water pooling between the two semicircular steel cave sections which are anchored and grouted to the concrete floor. Drainage is routed to each of the french drains via 7.6 centimeter (3 inch) drain pipelines.

Waste Type: Stormwater Runoff

Waste The inlet to this french drain is between the two semi-circular steel pipes. It received stormwater

Description: that percolated down through the earth berm covering the caves.

Site Code: 100-K-10 Classification: Rejected (10/1/1997)

Site Names: 100-K-10, 118-KE-2 French Drain (South), ReClassification:

104-K Dry Well

Site Type: French Drain Start Date: 1953

Site Status: Inactive End Date:

Site Description:

The site is the southernmost of two french drains at the 118-KE-2. The french drain is a 0.6 meters (2 feet) diameter steel pipe with a steel cover. It is gravel filled to grade and surrounded by a yellow wooden barricade. The steel cover is posted with a confined space sign. The adjacent area is covered with gravel and cobbles.

Each side of the 118-KE-2 Horizontal Control Rod Cave floor was sloped towards a drain. The drain was designed to receive rainwater that percolated through the earth berm covering the Rod Cave. The drains helped minimize water pooling between the two semicircular steel cave sections which are anchored and grouted to the concrete floor. Drainage is routed to each of the french drains via 3 in (7.6 cm) drain pipelines.

Waste Type: Stormwater Runoff

Waste The inlet to this french drain is between the two semi-circular steel pipes. It received stormwater

Description: that percolated down through the earth berm covering the caves.

Site Code: 100-K-11 Classification: Rejected (10/1/1997)

Site Names: 100-K-11, 118-KW-2 French Drain ReClassification:

(North), 104-K Dry Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is the northernmost of two french drains at the 118-KW-2. The french drain is a 0.6 meters (2 feet) diameter steel pipe with a steel cover. It is gravel filled to grade and surrounded by a yellow wooden barricade. The steel cover is posted with a confined space sign. The adjacent area is covered with gravel and cobbles.

Each side of the 118-KW-2 Horizontal Control Rod Cave floor was sloped towards a drain. The drain was designed to receive rainwater that percolated through the earth berm covering the Rod Cave. The drains helped minimize water pooling between the two semicircular steel cave sections which are anchored and grouted to the concrete floor. Drainage is routed to each of the french drains via 3 in (7.6 cm) drain pipelines.

Waste Type: Stormwater Runoff

Waste The inlet to this french drain is between the two-semi-circular steel pipes. It received

Description: stormwater that percolated down through the earth berm covering the caves.

Site Code: 100-K-12 Classification: Rejected (10/1/1997)

Site Names: 100-K-12, 118-KW-2 French Drain **ReClassification:**

(South), 104-K Dry Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is the southernmost of two french drains at the 118-KW-2. The french drain is a 0.6 meters (2 feet) diameter steel pipe with a steel cover. It is gravel filled to grade and surrounded by a yellow wooden barricade. The steel cover is posted with a confined space sign. The adjacent area is covered with gravel and cobbles.

Each side of the 118-KW-2 Horizontal Control Rod Cave floor was sloped towards a drain. The drain was designed to receive rainwater that percolated through the earth berm covering the Rod Cave. The drains helped minimize water pooling between the two semicircular steel cave sections which are anchored and grouted to the concrete floor. Drainage is routed to each of the french drains via 3 in (7.6 cm) drain pipelines.

Waste Type: Stormwater Runoff

Waste The inlet to this french drain is between the two semi-circular steel pipes. It received stormwater **Description:** that percolated down through the earth berm covering the caves.

Site Code: 100-K-13 Classification: Accepted

Site Names: 100-K-13, French Drain West of the 166- **ReClassification:**

KW Oil Storage Tank Facility

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that is a 1.5-meter (5-foot) diameter vertical concrete pipe filled with **Description:** gravel. Prior to the construction of the Cold Vacuum storage Facility, the drain had been almost

flush with the ground surface. Facility construction required the area to be graded. The construction project has scraped the ground down about 1.8 meters (6 feet) leaving the french drain about 2.3 meters (7.5 feet) above ground level. The french drain is now covered by a corrigated metal caisson to protect the french drain structure. Prior to current construction

activities, the drain extended above grade about 0.46 meters (1.5 feet) and was surrounded by a yellow wooden barricade.

The french drain has no markings of any kind. No other documentation or drawings could be found that identify the site or its purpose. Prior to current construction, no facilities were close to the site.

Site Code: 100-K-14 Classification: Accepted

Site Names: 100-K-14, 183-KE Acid Neutralization Pit **ReClassification:**

and Overflow French Drain

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The pit is 4.6 meters (15 feet) deep with a bottom dimension of 1.5 meters (5 feet) in diameter.

Description: Eight to thirteen-centimeter (3 to 5-inch) aggregate was placed to a depth of 2.1 meters (7 feet).

A 0.76-meter (2.5-foot) diameter, 2.4-meter (8-foot) long vitrified clay pipe (VCP) was placed vertically in the center of the pit and 1.2 meters (4 feet) of aggregate were placed around the pipe exterior. Approximately 1.5 meters (5 feet) of limestone chips were added to the pipe interior. A 5.1-centimeter (2-inch) schedule 80 polyvinyl chloride (PVC) pipe enters through the side 1 meter (3.3 feet) below grade. The pipe is an overflow and drain line for the 183-KE Day Use Acid Tank. The pit was then backfilled to grade. The VCP is exposed a few inches above grade and is covered with a 0.64-centimeter (0.25-inch) steel plate with four 2.54-centimeter (1-inch) vent

holes. Four steel yellow corner posts surround the above grade VCP.

Waste Type: Chemicals

Waste The site received sulfuric acid overflow and drainage from the 183-KE Day Use Acid Tank.

Description:

Site Code: 100-K-15 Classification: Rejected (2/7/2001)

Site Names: 100-K-15, 183-KW Liquid Alum Storage ReClassification:

Tank (West)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The site is an above-ground vertical stainless-steel storage tank mounted on a concrete base. The **Description:** tank was part of a system called. The Liquid Alum System, that supplied liquid alum for water

tank was part of a system called, The Liquid Alum System, that supplied liquid alum for water treatment. The liquid was supplied either by rail car or tank truck, as both connections are shown on the Liquid Alum System diagram in HW-24800-103. The piping and instrument identification diagram, H-1-16552, shows the pipelines, valves, and instrumentation related to the tank. During the winter, the liquid alum was pumped through heat exchangers for purpose of heating and

agitating the chemicals.

Site Code: 100-K-16 Classification: Rejected (2/7/2001)

Site Names: 100-K-16, 183-KW Liquid Alum Storage ReClassification:

Tank (East)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is an above-ground vertical stainless steel storage tank mounted on a concrete base. The tank was part of the Liquid Alum System that supplied liquid alum for water treatment. The liquid was supplied either by rail car or tank truck, as both connections are shown on the Liquid Alum System diagram in HW-24800-103. The piping and instrument identification diagram, H-1-16552, shows the pipelines, valves, and instrumentation related to the tank. During the winter, the liquid alum was pumped through heat exchangers for purpose of heating and agitating the chemicals.

Site Code: 100-K-18 Classification: Accepted

Site Names: 100-K-18, 183-KW Caustic Neutralization **ReClassification:**

Pit

Site Type: Sump Start Date:
Site Status: Inactive End Date:

The pit is a 2.54-meter (8.3-foot) long, 1.93-meter (6.3-foot) wide, 0.9-meter (3-foot) deep brick lined concrete box with a wooden cover. The pit was constructed in such a way that small

lined concrete box with a wooden cover. The pit was constructed in such a way that small volumes of waste chemicals could be held up in a brick lined compartment for neutralization. After neutralization, waste was flushed to a larger compartment within the structure, which then

drained to the process sewer.

Waste Type: Process Effluent

Waste The pit received, neutralized, and disposed of caustic (sodium hydroxide) waste from overflow

Description: and transfers associated with the 183-KW water treatment system.

Site Code: 100-K-19 Classification: Accepted

Site Names: 100-K-19, 183-KW Caustic Soda Storage **ReClassification:**

Tank Site

Site Type: Foundation Start Date: 1954

Site Status: Inactive End Date:

Site The site was originally an above-ground, cylindrical, vertical steel storage tank on a concrete base. The above-ground tank was 7.8 meters (25.5 feet) in diameter with a 287,660-liter (76,000-

gallon) capacity. Some time in the past (date unknown) the tank was removed. Today, the site is the 9.1-meter (30-foot) diameter grade-level concrete tank base and the soil surrounding the base.

Waste Type: Chemical Release

Waste The unit was used to store sodium hydroxide. Spills may have occurred near the unit. The **Description:** piping system may have developed leaks. This is likely to have resulted in sodium hydroxide in

the soil beneath and around the unit.

Site Code: 100-K-20 Classification: Rejected (2/7/2001)

Site Names: 100-K-20, 183-KW Sodium Silicate ReClassification:

Storage Tank (West)

Site Type:FoundationStart Date:1955Site Status:InactiveEnd Date:1964

Site Description:

The site was the western-most of the above-ground vertical tanks that were used to store liquid sodium silicate. Initially, tank trucks supplied the chemical for the tanks. Estimating from procurement and construction drawings for the bauxite tank (Project CAI 105), the sodium silicate tanks were removed in 1964 or 1965. Following removal, the bagged dry powder form of the chemical was used.

The grade-level concrete base remained following removal of the tanks. The west tank base (Sodium Silicate Tank #1) is occupied by a bauxite storage tower (silo) and transfer system.

Waste Type: Chemicals

Waste The unit stored sodium silicate. While the tanks were in use, the sodium silicate was purchased

Description: and stored in liquid form.

Site Code: 100-K-21 Classification: Rejected (2/7/2001)

Site Names: 100-K-21, 183-KW Sodium Silicate ReClassification:

Storage Tank (East)

Site Type:FoundationStart Date:Site Status:InactiveEnd Date:

Site The site was the eastern-most of the above-ground vertical tanks that were used to store liquid **Description:** sodium silicate. Initially, tank trucks supplied the chemical for the tanks. Estimating from

procurement and construction drawings for the bauxite tank (Project CAI 105), the sodium silicate tanks were removed in 1964 or 1965. Following removal, the bagged dry powder form of the

chemical was used.

The grade-level concrete base remained following removal of the tanks.

Waste Type: Chemicals

Waste The unit stored sodium silicate. While the tanks were in use, the sodium silicate was purchased

Description: and stored in liquid form.

Site Code: 100-K-22 Classification: Rejected (2/7/2001)

Site Names: 100-K-22, 183-KE Sodium Silicate Storage **ReClassification:**

Tank (West)

Site Type:FoundationStart Date:1955Site Status:InactiveEnd Date:1964

Site The site was the western-most of the above-ground vertical tanks that were used to store liquid **Description:** sodium silicate. Initially, tank trucks supplied the chemical for the tanks. Estimating from

sodium silicate. Initially, tank trucks supplied the chemical for the tanks. Estimating from procurement and construction drawings for the bauxite tank (Project CAI 105), the sodium silicate tanks were removed in 1964 or 1965. Following removal, the bagged dry powder form of the

chemical was used.

The grade-level concrete base remained following removal of the tanks. The west tank base (Sodium Silicate Tank #1) is occupied by a bauxite storage tower (silo) and transfer system.

Waste Type: Chemicals

Waste The unit stored sodium silicate. While the tanks were in use, the sodium silicate was purchased

Description: and stored in liquid form.

Site Code: 100-K-23 Classification: Rejected (2/7/2001)

Site Names: 100-K-23, 183-KE Sodium Silicate Storage ReClassification:

Tank (East)

Site Type:FoundationStart Date:1955Site Status:InactiveEnd Date:1964

Site The site was the eastern-most of the above-ground vertical tanks that were used to store liquid **Description:** sodium silicate. Initially, tank trucks supplied the chemical for the tanks. Estimating from

procurement and construction drawings for the bauxite tank (Project CAI 105), the sodium silicate tanks were removed in 1964 or 1965. Following removal, the bagged dry powder form of the

chemical was used.

The grade-level concrete base remained following removal of the tanks.

Waste Type: Chemicals

Waste The unit stored sodium silicate. While the tanks were in use, the sodium silicate was purchased

Description: and stored in liquid form.

Site Code: 100-K-24 Classification: Rejected (2/7/2001)

Site Names: 100-K-24, 183-KW Bauxite Tank **ReClassification:**

Site Type:Storage TankStart Date:1966Site Status:InactiveEnd Date:1972

Site Description:

The site is a single bauxite (aluminum oxide) above-ground storage tank (silo). The addition of the tank was part of a proposal to reduce water treatment costs by approximately \$278,000 per year in the 183-KE and KW Buildings. Hanford document, HW-76926, is the engineering study that proposed replacing the existing liquid alum coagulant feed process with one which fed bauxite and sulfuric acid.

The tank was constructed on the site of the former Sodium Silicate #1 Tank. The tank had a capacity of 109,000 kilograms (240,000 pounds). One of the unused solution tanks, 45,400 kilograms (100,000 pounds) in capacity in the 183 Building (KE and KW) was converted to a bauxite feed bin. The feed bin was vented and equipped with a bag filter. The two silos (KE and KW) and the feed bin together provided approximately 33 days storage capacity. Other components of the system are listed below.

A pneumatic conveying system was provided that was equipped with cyclone separators to transfer bauxite from hopper cars or boxcars to the outside silos and from either silo to the feed bin inside the building. The bauxite was transferred intermittently from the silos to the feed bin and did not interfere with any rail car unloading. The system was sized to unload a rail car in a single work shift.

Two dry feeders, including one spare, moved bauxite from the feed bin to a slurry mix tank. The spare feeder was included to eliminate the need to prepare slurry manually on a batch basis during maintenance shutdown of the other feeder.

A mix tank, with agitator, for slurrying bauxite and water was a component of the system. Two pumps in parallel were used to transfer the slurry to reaction vessels.

Two parallel systems, each consisting of a glass-lined reaction vessel, with glass-lined pipe tieins; an eductor which took suction from the reaction vessel, adding dilution water; and a pump, in series with the eductor, discharged through the chlorine injection piping to the raw water headers. Glass-lined pipe was used between the reaction vessel and eductor, and plastic pipe between the eductors and injection piping. Acid was supplied to the reaction vessel, where it was mixed with the bauxite slurry by steam sparging, from an existing head tank by gravity feed.

An exhaust system included a water scrubber to remove steam, air, and acid fumes from the reaction vessels

Waste Type: Chemicals

Waste Description:

The tank was used to store dry bauxite (hydrous aluminum oxide or hydroxides with various impurities). The tank appears to have been emptied, although dry powder can be seen through the plexiglass cover indicating that no additional cleanup was performed. Bauxite is not listed in 40 CFR 302.4 as a hazardous substance and is not a CERCLA pollutant. No dangerous wastes or CERCLA hazardous substances, pollutants, or contaminants were stored or disposed of at this site.

Site Code: 100-K-25 Classification: Accepted

Site Names: 100-K-25, 183-KE Caustic Neutralization ReClassification:

Pit

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site Description:

caustic waste prior to disposal. The structure has been backfilled and covered to grade with gravel. The "pit" is a concrete box that is lined with acid-proof bricks. A 10.2-centimeter (4-inch) vitrified tile drain was located in the bottom of the pit and discharged the neutralized waste to the process sewer. The top of the pit was level with the surface and had a 7.6-centimeter (3-inch) plank cover.

The 183-KE Caustic Neutralization Pit is an underground concrete structure used to neutralize

Waste Type: Chemicals

Waste

The pit received and neutralized sodium hydroxide waste.

Description:

Site Code: 100-K-27 Classification: Accepted

Site Names: 100-K-27, 183-KE Caustic Soda Storage ReClassification:

Tank Site

Site Type: Foundation Start Date: 1954

Site Status: Inactive End Date:

Site The site was originally an above-ground, cylindrical, vertical steel storage tank on a concrete

Description: base. The above-ground tank was 7.8 meters (25.5 feet) in diameter with a 287,660-liter (76,000-gallon) capacity. Some time in the past (date unknown) the tank was removed. Today, the site is the 9.1-meter (30-feet) diameter grade-level concrete tank base and the soil surrounding the base.

Waste Type: Chemical Release

Waste The tank was used to store sodium hydroxide. There is a possibility the tank and/or piping may

Description: have leaked.

Site Code: 100-K-28 Classification: Rejected (2/7/2001)

Site Names: 100-K-28, 183-KE Bauxite Tank **ReClassification:**

Site Type:Storage TankStart Date:1966Site Status:InactiveEnd Date:1972

Site Description:

The site is a single bauxite (aluminum oxide) above-ground storage tank (silo). The addition of the tank was part of a proposal to reduce water treatment costs by approximately \$278,000 per year in the 183-KE and KW Buildings. Hanford document, HW-76926, is the engineering study that proposed replacing the existing liquid alum coagulant feed process with one which fed bauxite and sulfuric acid.

The tank was constructed on the site of the former Sodium Silicate #1 Tank. The tank had a capacity of 109,000 kilograms (240,000 pounds). One of the unused solution tanks, 45,400 kilograms (100,000 pounds) in capacity in the 183 Building (KE and KW) was converted to a bauxite feed bin. The feed bin was vented and equipped with a bag filter. The two silos (KE and KW) and the feed bin together provided approximately 33 days storage capacity. Other components of the system are listed below.

A pneumatic conveying system was provided that was equipped with cyclone separators to transfer bauxite from hopper cars or boxcars to the outside silos and from either silo to the feed bin inside the building. The bauxite was transferred intermittently from the silos to the feed bin and did not interfere with any rail car unloading. The system was sized to unload a rail car in a single work shift.

Two dry feeders, including one spare, moved bauxite from the feed bin to a slurry mix tank. The spare feeder was included to eliminate the need to prepare slurry manually on a batch basis during maintenance shutdown of the other feeder.

A mix tank, with agitator, for slurrying bauxite and water was a component of the system. Two pumps in parallel were used to transfer the slurry to reaction vessels.

Two parallel systems, each consisting of a glass-lined reaction vessel, with glass-lined pipe tieins; an eductor which took suction from the reaction vessel, adding dilution water; and a pump, in series with the eductor, discharged through the chlorine injection piping to the raw water headers. Glass-lined pipe was used between the reaction vessel and eductor, and plastic pipe between the eductors and injection piping. Acid was supplied to the reaction vessel, where it was mixed with the bauxite slurry by steam sparging, from an existing head tank by gravity feed.

An exhaust system included a water scrubber to remove steam, air, and acid fumes from the reaction vessels.

Waste Type: Chemicals

Waste The tank was used to store dry bauxite, aluminum oxide or hydroxides with various impurities.

Description: The tank appears to have been emptied, although dry powder can be seen through the plexiglass

cover indicating that no additional cleanup was performed.

Site Code: 100-K-29 Classification: Accepted

Site Names: 100-K-29, 183-KE Sandblasting Site **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site surface is gravel/cobble and purple garnet. It is irregularly shaped and covers an area of

Description: ~50 yd (46 m) x 30 yd (27 m).

Waste Type: Chemicals

Waste At this site in the early 1980's, steel components from the 183-KE settling basins were

Description: sandblasted prior to being sold as scrap. Sampling in 1989 indicated the material present to be

nonregulated for EP Toxicity.

Site Code: 100-K-30 Classification: Accepted

Site Names: 100-K-30, 183-KE Sulfuric Acid Tank ReClassification:

Bases (West Tank)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The site consists of two aboveground U-shaped concrete bases and aboveground piping. The U-**Description:** shaped bases are 3.7 meters (12 feet) wide, 1.2 meters (4 feet) long, 1.8 meters (6 feet) high, and

10 meters (33 feet) apart. A cylindrical tanks laid horizontally on the two concrete U-shaped bases. The tank measured 3 meters (10 feet) in diameter, 10 meters (33 feet) long and had a

77,140-liter (20,380-gallon) capacity. It is unknown when the tank was removed.

Waste Type: Chemicals

Waste The tank bases held a tank that was used to store sulfuric acid.

Description:

Site Code: 100-K-31 Classification: Accepted

Site Names: 100-K-31, 183-KE Sulfuric Acid Tank ReClassification:

Bases (East tank)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The unit consists of two aboveground U-shaped concrete bases and above-ground piping. The U-

Description: shaped bases are 3.7 meters (12 feet) wide, 1.2 meters (4 feet) long, 1.8 meters (6 feet) high, and

10 meters (33 feet) apart. A tank appears at the site in a March 1962 photograph. The cylindrical tank laid horizontally on two concrete U-shaped bases. The tank was 3 meters (10 feet) in diameter, 10 meters (33 feet) long and had a 77,140-liter (20,380 gallon) capacity. It is unknown

when the tank was removed. Tank bases and piping remain.

Waste Type: Chemicals

Waste The tank was used to store sulfuric acid.

Description:

Site Code: 100-K-32 Classification: Accepted

Site Names: 100-K-32, 183-KW Sulfuric Acid Tank ReClassification:

Bases (East tank)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

The unit consists of two above-ground U-shaped concrete bases and aboveground piping. The U-**Description:** shaped bases are 3.7 meters (12 feet) wide, 1.2 meters (4 feet) long, 1.8 meters (6 feet) high, and

10 meters (33 feet) apart. A cylindrical tank (which appeared at the site in a March 1962

photograph) laid horizontally on two concrete U-shaped bases. The tank was 3 meters (10 feet) in diameter, 10 meters (33 feet) long and had a 77,140-liter (20,380-gallon) capacity. It is unknown when the tank was removed. Tank bases and piping remain. The surface soils are stained with

what appears to be acid residue.

Waste Type: Equipment

Waste Two concrete tank pedestals and associated sulfuric acid piping remain at the site.

Description:

Waste Type: Soil

Waste The soil is contaminated from sulfuric acid leaks or spills.

Description:

Site Code: 100-K-33 Classification: Accepted

Site Names: 100-K-33, 183-KW Sulfuric Acid Tank ReClassification:

Bases (West tank)

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The ur

The unit consists of two above-ground U-shaped concrete bases and above-ground piping. The U-shaped bases are 3.7 meters (12 feet) wide, 1.2 meters (4 feet) long, 1.8 meters (6 feet) high, and 10 meters (33 feet) apart. A tank appears at the site in a March 1962 photograph. The cylindrical tank loid horizontally on two appears II shaped bases. The tank was 3 meters (10 feet) in

tank laid horizontally on two concrete U-shaped bases. The tank was 3 meters (10 feet) in diameter, 10 meters (33 feet) long and had a 77,140-liter (20,380-gallon) capacity. It is unknown

when the tank was removed.

Waste Type: Chemicals

Waste The tank was used to store sulfuric acid.

Description:

Description:

Site Code: 100-K-34 Classification: Accepted

Site Names: 100-K-34, 183-KW Acid Neutralization Pit ReClassification:

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site The unit consists of 2.5 by 1.9-meter (8.3 by 6.3-foot) brick-lined concrete boxes. The boxes are **Description:** 1.5 meters (5 feet) deep and backfilled with crushed limestone. Drain pipes entered about 0.6

meters (2 feet) below grade and emptied into a 0.9-meter (3-foot) diameter vitrified clay pipe (VCP) placed vertically in limestone chips. The VCP is filled with limestone chips. The VCP is

broken at the top.

Waste Type: Chemicals

Waste The site was used to neutralize and dispose of overflow and transfer waste from nearby sulfuric

Description: acid tanks.

Site Code: 100-K-35 Classification: Accepted

Site Names: 100-K-35, 183-KE Acid Neutralization Pit ReClassification:

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site The site is a below grade 2.5 meter by 1.9 meter (8.33 feet by 6.33 feet) brick-lined concrete box,

Description: approximately 1.5 meters (5 feet) deep and backfilled with crushed limestone. Drain pipes entered the pit approximately 0.6 meters (2 feet) below grade and emptied into a vertical 0.9

meter (3 foot) diameter vitrified clay pipe. The vitrified clay pipe is also filled with limestone chips and appears to be broken at the top. The site is covered by a wooden lid labeled "Confined

Space" and is surrounded by post and chain.

Waste Type: Chemicals

Waste The site was used to neutralize and dispose of overflow and transfer waste from nearby sulfuric

Description: acid tanks.

Site Code: 100-K-36 Classification: Accepted

Site Names: 100-K-36, 1706-KE Chemical Storage **ReClassification:**

Facility Dry Well

Site Type: French Drain Start Date: 1962

Site Status: Inactive End Date:

Site The site is a dry well (french drain) that was added to the 1706-KE Building as part of the

Description: Chemical Storage Facility. The drain is located at grade level and centered between the 1706-KE

Caustic Tank and the 1706-KE Sulfuric Acid Tank. The site is constructed from an 0.46 meter (18 inch) vitrified clay pipe that is 1.2 meters (4 feet) long and extends 7.6 centimeters (3 inches) above grade. The site is filled to grade with crushed limestone. Overflow and drain pipes [two 5.1 centimeter (2 inch) pipelines from each chemical storage tank] extend to just above the

surface of the limestone fill.

Waste Type: Chemicals

Waste A white crystalline material that may be sodium hydroxide can be seen in cracks of the tunnel.

Description: This may indicate that large quantities of sodium hydroxide and/or water have been disposed to

this drain.

Site Code: 100-K-37 Classification: Accepted

Site Names: 100-K-37, 1706-KE Sulfuric Acid Tank **ReClassification:**

Site Type:Storage TankStart Date:1963Site Status:InactiveEnd Date:1986

Site **Description:** The site is an above ground, vertical, constructed of stainless steel storage tank. The tank rests on a redwood timber deck above a 1.4 meter (4.45 foot) service space (at grade) that is protected by guard posts. A 5.1 centimeter (2 inch) fill line for tank truck usage is also located in the same area. Two 5.1 centimeter (2 inch) drain lines, one for vent and overflow and the other for valve leakage, enter a french drain (Site: 100-K-36) that is located (in the service area) between the caustic soda tank (100-K-38) and the sulfuric acid tank. The tank has a liquid level gauge, a 5.1 centimeter (2 inch) fill line, and a vent and overflow line. The top of the tank could be accessed via a ladder and platform at the top elevation of the tank. The tank was constructed with a bottom sloping towards the drain. When installed, the tank was shimmed to level it.

Waste Type: Chemicals

A heel of sulfuric acid remains on the bottom of the tank, and an unknown quantity of sulfuric Waste

acid remains in the transfer lines inside the 1706KE facility. **Description:**

Site Code: 100-K-38 **Classification:** Accepted

Site Names: 100-K-38, 1706-KE Caustic Soda Tank **ReClassification:**

Site Type: Unplanned Release **Start Date:** 1963 **Site Status:** Inactive **End Date:** 1986

Site **Description:**

Site

The site is contaminated soil from spills related to a caustic soda storage tank. The tank is above ground, vertical, and constructed of stainless steel. The tank rests on a redwood timber deck above a 1.4 meter (4.45 foot) service space (at grade) that is protected by guard posts. A 5.1 centimeter (2 inch) fill line for tank truck usage is also located in the same area. Two 5.1 centimeter (2 inch) drain lines, one for vent and overflow and the other for valve leakage, enter a french drain (Site: 100-K-36) that is located (in the service area) between the caustic soda tank and the sulfuric acid tank (Site: 100-K-37). The tank is insulated, has a liquid level gauge, a 5.1 centimeter (2 inch) fill line, a vent and overflow line, thermostat, and heating element. The top of the tank could be accessed via a ladder and platform at the top elevation of the tank. The tank was constructed with a bottom sloping towards the drain. When installed, the tank was shimmed to level it

Chemicals Waste Type:

Waste Site employees have reported that spills occurred at the site. The tank exterior was rinsed down after the spills and into the soil column. A white material that may be sodium hydroxide powder **Description:**

can be seen in the cracks of the lower level ceiling beneath the location of the tank base.

Site Code: 100-K-39 **Classification:** Rejected (10/1/1997)

Site Names: 100-K-39, 118-K-3 Filter Crib **ReClassification:**

Site Type: Crib **Start Date: End Date:** Inactive

Site Status:

The site was reported to be a crib. The first reference to a site identified as 118-K-3 Filter Crib **Description:** was DOE/RL-90-20 (1992). In this document, it states that the site was used to dispose of

> demineralizer, and research and development waste from the 1706-KE Building. A sketch, Figure 5-1. Proposed Boring Locations at 100-KR-1 Operable Unit High Priority Liquid Waste Facilities, shows a site labeled 118-K-3 Filter Crib between and south of the retention basins. The

area where this site is mapped is the identical location of a fenced electrical distribution intertie

that connects electrical service between 100K East and 100K West.

WHC-SD-EN-TI-239, 100-K Area Technical Baseline Report states that the crib could not be located during field investigations for the report. Further, it says that a fenced, high-voltage power distribution system is located at the site described by DOE/RL-90-20. The document continues with the crib received liquid wastes from the 1705KE/KER Laboratory. Discussions with present and former site employees, and investigations using Hanford Drawings (H-1-20305, H-1-23215, and H-1-24226), indicate that all cribbed wastes from the 1706-KE/KER facilities were disposed in the 116-KE-2 Crib.

The initial Waste Information Data System (WIDS) entry for this site was not done until 1994. The information contained on the data entry form (A-6000-501) was based on WHC-SD-SD-TI-239. It was also recommended that the site not be entered as a waste site due to the uncertainly of the site's existence. A field visit by WIDS personnel was performed on August 16, 1994. There was no evidence of a waste site at the prescribed location.

Site Code: 100-K-42 Classification: Accepted

Site Names: 100-K-42, 100 Area KE Basin, 105-KE **ReClassification:**

Fuel Storage Basin, K East Basin, Irradiated Fissile Material Storage, Metal

Storage Basin, 100-K-40

Site Type: Storage Start Date: 1955

Site Status: Active End Date:

Site Description:

The site is the fuel storage basin for the 105-KE Reactor. The fuel storage basin is located at the rear of the reactor. The concrete basin area served as a collection, storage, and transfer facility for the irradiated fuel elements discharged from the reactor. Irradiated reactor fuel elements were stored at the bottom of large water filled storage basins pending their shipment to the chemical separations facilities in the 200 Areas. The water in the basins served both as coolant and as shielding. The basin consists of a discharge chute and fuel element pickup area, a storage area, a transfer area, and a wash pad area.

The basin area is floored throughout at ground level with steel grating which is suspended from the steelwork of the roof above by means of vertical pipe columns. A grid of 32 monorails evenly spaced crosses the basin, overhead, from north to south, connects at the ends with a monorail which completely encircles the area. Bars suspended from trolleys which roll on these rails extend down through slots in the floor grating to a point near the bottom of the basin, where they support and carry buckets used for conveying the processed metal. Transverse rails extend from the outer rail loop into the transfer area at the west end of the basin, and the viewing and weasel pits at the east end. Crossovers are installed for switching the trolleys from track to track.

The transfer area contains two sets of standard gauge railway tracks which extend into the building at ground level through the west wall. Adjacent to each track is a loading pit, which leads off from the main basin. As the system functions, irradiated metal slugs drop from the rear or discharge face of the reactor through a discharge gate of special design to the bottom of the bay between reactor and basin. A heavy rubber mattress is installed here to cushion the fall. The slugs are picked up by long handled tongs manipulated from the floor grating, and placed into buckets. The loaded buckets are suspended on the monorail conveyor system, by which they are conveyed across and around the storage basin to the loading pits. This transfer is timed in short moves over a lengthy period so that in effect the slugs are stored for some time in the storage basin, for the purpose of dissipating radioactivity. When the slugs reach the transfer area they are placed, still underwater, into large specially constructed containers called "casks". The loaded casks are hoisted from the bottom of the pits and placed on the cask cars, which are switched in on the adjacent tracks. The cars approximate standard railway equipment in size, and are

designed and built for the cask freightage.

The viewing and weasel pits at the other end of the storage basin contain equipment for manipulating and examining selected slugs while under water. The function of the entire basin installation is to provide for handling radioactive metal under a shielding layer of water.

A number of irradiated uranium fuel elements were found in both fuel storage basins when sludge was removed in 1975 after reactor operations were terminated. Dorian and Richards (1978) reports that the 105-KW storage basin was cleaned, modified and being used for the storage of irradiated fuels from N Reactor. At the time of the report the 105-KE basin had been cleaned and was in the process of being modified for the same purpose. In 1974 and 1975, both basins were modified to a recirculating cooling system by the utilization of heat exchangers once used to transfer heat from the reactor cooling water elimination system to facility heating (Project H-501). The 105-KE basin has been used to store fuels in open storage containers. Consequently, the 105-KE basin is far more radioactively contaminated than the 105-KW basin.

Waste Type: Sludge

Waste Description:

The spent nuclear fuel in the KE basin is in the form of irradiated uranium elements clad in aluminum or zirconium alloy and immersed in water. The fuel elements in the K East Basin are stored in open canisters. By-product material which includes corroded cladding, fuel particles, and insoluble plutonium and uranium metal has settled on the basin floor. Concrete debris resulting from erosion of the basin walls, transient soil and other types of dregs have also accumulated in the basins. This concurrent accumulation of various materials in the basins is commonly referred to by the Spent Nuclear Fuel (SNF) Project as the 100-K Basins sludge. The 100-K East Basin contains approximately 50 cubic meters of sludge.

Site Code: 100-K-43 Classification: Accepted

Site Names: 100-K-43, KW Basin, 105-KW Fuel ReClassification:

Storage Basin, K West Basin, Irradiated

Fissile Material Storage

Site Type:StorageStart Date:1955Site Status:ActiveEnd Date:1971

Site Description:

The site is the fuel storage basin for the 105-KW Reactor. The fuel storage basin is located at the rear of the reactor. The concrete basin area served as a collection, storage, and transfer facility for the irradiated fuel elements discharged from the reactor. Irradiated reactor fuel elements were stored at the bottom of large water filled storage basins pending their shipment to the chemical separations facilities in the 200 Areas. The water in the basins served both as coolant and as shielding. The basin consists of a discharge chute and fuel element pickup area, a storage area, a transfer area, and a wash pad area.

The basin area is floored throughout at ground level with steel grating which is suspended from the steelwork of the roof above by means of vertical pipe columns. A grid of 32 monorails evenly spaced crosses the basin, overhead, from north to south, connects at the ends with a monorail which completely encircles the area. Bars suspended from trolleys which roll on these rails extend down through slots in the floor grating to a point near the bottom of the basin, where they support and carry buckets used for conveying the processed metal. Transverse rails extend from the outer rail loop into the transfer area at the west end of the basin, and the viewing and weasel pits at the east end. Crossovers are installed for switching the trolleys from track to track.

The transfer area contains two sets of standard gauge railway tracks which extend into the building at ground level through the west wall. Adjacent to each track is a loading pit, which

leads off from the main basin. As the system functions, irradiated metal slugs drop from the rear or discharge face of the reactor through a discharge gate of special design to the bottom of the bay between reactor and basin. A heavy rubber mattress is installed here to cushion the fall. The slugs are picked up by long handled tongs manipulated from the floor grating, and placed into buckets. The loaded buckets are suspended on the monorail conveyor system, by which they are conveyed across and around the storage basin to the loading pits. This transfer is timed in short moves over a lengthy period so that in effect the slugs are stored for some time in the storage basin, for the purpose of dissipating radioactivity. When the slugs reach the transfer area they are placed, still underwater, into large specially constructed containers called "casks". The loaded casks are hoisted from the bottom of the pits and placed on the cask cars, which are switched in on the adjacent tracks. The cars approximate standard railway equipment in size, and are designed and built for the cask freightage.

The viewing and weasel pits at the other end of the storage basin contain equipment for manipulating and examining selected slugs while under water. The function of the entire basin installation is to provide for handling radioactive metal under a shielding layer of water.

A number of irradiated uranium fuel elements were found in both fuel storage basins when sludge was removed in 1975 after reactor operations were terminated. Dorian and Richards (1978) reports that the 105-KW storage basin was cleaned, modified and being used for the storage of irradiated fuels from N Reactor. At the time of the report the 105-KE basin had been cleaned and was in the process of being modified for the same purpose. In 1974 and 1975, both basins were modified to a recirculating cooling system by the utilization of heat exchangers once used to transfer heat from the reactor cooling water elimination system to facility heating (Project H-501). The 105-KW basin has been used to store fuels in sealed storage containers. Consequently, the 105-KW basin is far less radioactively contaminated than the 105-KE basin.

Waste Type: Sludge

Waste Description:

The spent nuclear fuel in the KW basin is in the form of irradiated uranium elements clad in aluminum or zirconium alloy and immersed in water. The fuel elements in the K West Basin are stored in closed canisters. By-product material which includes corroded cladding, fuel particles, and insoluble plutonium and uranium metal gas settled on the basin floor. Concrete debris resulting from erosion of the basin walls, transient soil and other types of dregs have also accumulated in the basins. This concurrent accumulation of various materials in the basins is commonly referred to by the Spent Nuclear Fuel (SNF) Project as the K Basins sludge. The K West Basin contains relatively little sludge as compared with the K East Basin which has approximately 50 cubic meters (38.2 cubic yards) of sludge.

Site Code: 100-K-44 Classification: Rejected (10/1/1997)

Site Names: 100-K-44, Grounds Surrounding **ReClassification:**

Deactivated Areas, Exclusion Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The grounds within the 100-K exclusion area that are not part of other waste sites.

Description:

Site Code: 100-K-46 Classification: Accepted

Site Names: 100-K-46, 119-KE French Drain, Drywell **ReClassification:**

Site Type: French Drain Start Date: 1959

Site Status: Inactive **End Date:**

The site is a drywell that received drainage from a floor drain in the 119-KE Sample Building. Site

The site has been covered with crushed rock and there was no visible evidence of the drywell on **Description:**

the ground surface during a site visit by T. F. Johnson on October 31, 1996.

The drywell is connected the 119-KE- Sample Building by a 5 centimeter (2 inch) drainage pipe buried at least 0.9 meters (3 feet) below grade. A 1.9 centimeter (3/4 inch) drain line from the building's evaporative cooler connected into the 5 centimeter (2 inch) drain line near the southern

edge of the building

Waste Type: Process Effluent

The drywell received effluent from the building's evaporative cooler. It is likely that the floor Waste drain also received sample waste and janitorial waste since the building had no other drains or **Description:**

connections to the process sewer system.

100-K-47 **Classification: Site Code:** Accepted

Site Names: 100-K-47, 1904-K Process Sewer **ReClassification:**

Site Type: Process Sewer **Start Date:** 1955

Site Status: Active **End Date:**

Site This site includes those underground process sewer pipelines that begin at the 105-KE Reactor, **Description:**

105-KW Reactor, 165-KE, 190-KE, 1706-KE, and terminate at either the 116-K-3 Outfall or join

the 100-K-56 Pipeline south of the outfall.

Manholes indicate the location of some sections of the process sewer. The main portion of the sewer that extends from the point of intersection with the 30.5 and 40.6 centimeter (12 and 16 inch) pipelines coming from 105-KW Reactor and 165-KE building to drop manhole #5 is a 1.68 meters by 1.68 meters (66 inches by 66 inches) concrete sewer. All other process sewer pipelines are constructed of carbon steel.

The site does not include the facilities where the pipelines terminate, or pipelines that are housed within building structures, which are addressed separately. This site does not include the radioactive process sewer pipelines, water supply pipelines, glycol heat pipelines, or other reactor effluent underground pipelines addressed by other sites. This site does not include the 1.7 meter (66 inch) pipeline that originates at 165-KW and up to the point of intersection with the 30.5 and 40.6 centimeter (12 and 16 inch) pipelines coming from 105-KW Reactor. This component of the 1904-K Process Sewer is site 100-K-60. The site has been split because of the different programmatic responsibilities associated with the two sites.

Waste Type: Process Effluent

Waste **Description:** Discharges included overflows from chemical makeup facilities that included chemical additives to reactor cooling water, e.g., aluminum sulfate (alum), with excess hydrated calcium oxide, sulfuric acid, and chlorine. Water pH was maintained at about 7.5, and free chlorine residual was about 0.3 milligrams per liter. Other discharges to the system included filter backflush waste water, coagulated sediments from the water treatment settling basins, demineralizer regeneration wastes, which included neutralized sulphuric acid and sodium hydroxide, brine wastes from water softeners, and pump cooling waste water.

Site Code: 100-K-48 Classification: Accepted

Site Names: 100-K-48, 100-KE Oil Contamination Areas ReClassification:

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site shows evidence of past fuel oil spills especially around the railroad tracks. The spills

Description: have been absorbed into the soil and have formed an asphalt like substance. Some areas may

have been covered with clean soil.

Waste Type: Oil

Waste The waste is oil solidified into a hard asphalt-like substance.

Description:

Site Code: 100-K-49 Classification: Accepted

Site Names: 100-K-49, 100-KW Oil Contamination Area **ReClassification:**

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site shows evidence of past fuel oil spills especially around the railroad tracks. The spills **Description:** have been absorbed into the soil and have formed an asphalt like substance. The area between the

166-KW and the road south of 166-KW was discovered to be contaminated with oil during excavation of a trench for the Cold Vacuum Drying Facility. An oil contaminated layer of soil about 7.6 to 10.2 centimeters (3 to 4 inches) thick was discovered a few inches below the surface.

Waste Type: Oil

Waste The waste is oil solidified into a hard asphalt-like substance.

Description:

Site Code: 100-K-50 Classification: Accepted

Site Names: 100-K-50, 1725-K & 1726-K Sanitary ReClassification:

Sewer System Holding Tank

Site Type: Storage Tank Start Date: 1996

Site Status: Active End Date:

Site The site is a sanitary sewage holding tank that services 1725-K and 1726-K. The site is marked by eight red concrete posts. The tank is constructed of concrete and has three manholes on top

by eight red concrete posts. The tank is constructed of concrete and has three manholes on top and one hinged hatchcover. A 20.3 centimeter (8 inch) sanitary sewer pipeline runs in a north-south direction 9.1 meters (30 feet) east of the 1725-K (MO-293) and the 1726-K (MO-442)

south direction 9.1 meters (30 feet) east of the 1725-K (MO-293) and the 1726-K (MO-442) buildings into the south side of the holding tank. The tank is divided into two chambers. The normal operating volume is 11,355 liters (3000 gallons) and the total reserve volume is 17,032

liters (4500 gallons).

Waste Type: Sanitary Sewage

Waste Description:

Site Code: 100-K-51 Classification: Accepted

ReClassification: Rejected (9/14/2000)

Site Names: 100-K-51, 105-KE 90-Day Waste

Accumulation Area, 100K 90-Day Waste

Storage Facility

Site Type:Storage Pad (<90 day)</th>Start Date:Site Status:ActiveEnd Date:

Site The site is a white, portable steel building, with no windows, and three doors that are all on one side. The site is being used by the Spent Fuel Division for the 90 day storage of hazardous waste.

Waste Type: Chemicals

Waste

Description:

Site Code: 100-K-52 Classification: Rejected (10/1/1997)

Site Names: 100-K-52, 1706-KE Wet Fish Studies **ReClassification:**

Laboratory

Site Type:StorageStart Date:1956Site Status:ActiveEnd Date:1965

Site Description:

The site is currently in use by the Spent Nuclear Fuel (SNF) Program as a storage room. This site was split from 100-K-3 and 100-K-4, so that the programmatic responsibility for this area could be assigned to the correct program.

Prior to its use as a storage area, the site was a laboratory {used by Pacific Northwest Laboratory} that conducted wet fish studies using effluent cooling water. There was a small "wet lab" located in the 1706-KE Building and three small outdoor ponds (Site: 100-K-4). The laboratory consisted of eight 1.5 meters (5 feet) long by 0.3 meters (1 foot) wide troughs containing a mixture of raw water and heated effluent water. The water was diverted from the heat exchanger pit (Site: 100-K-3) on the 105-KE Reactor discharge pipeline and passed through the troughs. Originally, the laboratory was planned in the event of shutdown of the 105-F Reactor and its laboratory.

Waste Type: Water

Waste A mixture of raw water and heated effluent water passed though the troughs. The troughs and

Description: laboratory equipment have been removed from the building.

Site Code: 100-K-53 Classification: Accepted

Site Names: 100-K-53, 100-KE Glycol Heat Recovery **ReClassification:**

Underground Pipelines

Site Type:Product PipingStart Date:1955Site Status:InactiveEnd Date:1971

Site This site includes those underground pipelines that transported glycol solutions from the 116-KE-

Description: 5 (150 KE Heat Recovery Station) to their entrance to the 165-KE Powerhouse (Power Control Building) facilities. The pipelines consist of two 0.46-meter (1.5-foot) steel supply and return pipelines. It does not include the above-grade pipelines at the 116-KE-4 Station, the 100-K-7

Storage Tanks and piping, or the pipelines housed within these facilities.

Waste Type: Chemicals

Waste **Description:** The waste is pipelines that contained an ethylene glycol/water solution that was maintained at a slightly positive pressure to preclude leakage of reactor effluent water into the system via the

150-KE Heat Exchanger.

Site Code: 100-K-54 **Classification:** Accepted

Site Names: 100-K-54, 100-KW Glycol Heat Recovery **ReClassification:**

Underground Pipelines

Site Type: Product Piping Start Date: 1955 **Site Status: End Date:** 1971 Inactive

Site This site includes those underground pipelines that transported glycol solutions from the 116-KW-

Description: 4 (150 KW Heat Recovery Station) to their entrance into the 165-KW Powerhouse (Power

> Control Building) facilities. The pipelines consist of two 0.46-meter (1.5-foot) steel supply and return pipelines. It does not include the above-grade pipelines at the 116-KW-4 Station, the 100-

K-8 Storage Tanks and piping, or the pipelines housed within these facilities.

Waste Type: Chemicals

The waste is pipelines that contained an ethylene glycol/water solution that was maintained at a Waste

slightly positive pressure to preclude leakage of reactor effluent water into the system via the **Description:**

150-KW Heat Exchanger.

Site Code: 100-K-55 **Classification:** Accepted

Site Names: 100-K-55, 100-KW Reactor Cooling Water **ReClassification:**

Effluent Underground Pipelines

Start Date: Site Type: Radioactive Process Sewer 1955 **Site Status:** Inactive **End Date:** 1970

Site **Description:** This site includes those underground pipelines that begin at the 105-KW Reactor and terminate at the 116-K-3 Outfall, the 116-K-1 Crib, the 116-K-2 Trench, and the 116-KW-3 Retention Basins. It also includes the 61 centimeter (24 inch) process water pipeline connecting the 105-KW and 106-KE Reactors (south side), to the half-way point between them. This system was used to dispose of radioactive cooling and waste water from the reactor facility.

This site does not include the facilities where the pipelines terminate or the pipelines from the 116-K-3 Outfall to the bottom center of the Columbia River, which are addressed separately. Also, this site does not include nonradioactive process sewer pipelines, water supply pipelines, glycol heat pipelines, or other underground pipelines addressed by other sites. This site does not include the retention basins (the bulk of which was removed in 1995 to 1996), the 100-K-3 structure, the Outfall Structure, or the 2.1 meters (7 feet) diameter pipelines from the outfall to the bottom center of the Columbia River.

Waste Type: Process Effluent

Waste **Description:** The waste is contaminated steel piping, concrete, and soil. Chemical additives to reactor cooling water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid, chlorine, diatomaceous earth (a scouring agent), and sodium dichromate. Water pH was maintained at about 7.5, and free chlorine residual was about 0.2 milligrams per liter. Radionuclide content at the retention basin during sampling by Richards for UNI-946, included the following: cesium-134, plutonium 239/240, cesium-137, strontium-90, hydrogen-3, nickel63, europium-152, europium-154, europium-155, and cobalt-60.

Site Code: 100-K-56 Classification: Accepted

Site Names: 100-K-56, 100-KE Reactor Cooling Water **ReClassification:**

Effluent Underground Pipelines

Site Type: Radioactive Process Sewer Start Date: 1955

Site Status: Inactive End Date: 1971

Site This site includes those underground pipelines that begin at the 105-KE Reactor and terminate at the 116-K-3 Outfall, the 116-K-1 Crib, the 116-K-2 Trench, the 116-KE-4 Retention Basins, and

the 100-K-3 Heat Exchanger. This system was used to dispose of radioactive cooling and waste

water from the reactor facility.

This site does not include the facilities where the pipelines terminate or the pipelines from the 116-K-3 Outfall to the bottom center of the Columbia River, which are addressed separately. Also, this site does not include nonradioactive process sewer pipelines, water supply pipelines, glycol heat pipelines, or other underground pipelines addressed by other sites. This site does not include the retention basins (the bulk of which was removed in 1995 to 1996), the 100-K-3 Structure, the Outfall Structure, or the 2.1-meter (7-foot) diameter pipelines from the outfall to the bottom center of the Columbia River

Waste Type: Process Effluent

Waste The waste is contaminated steel piping, concrete, and soil. Chemical additives to reactor cooling **Description:** water included aluminum sulfate (alum) with excess hydrated calcium oxide, sulfuric acid,

chlorine, diatomaceous earth (a scouring agent), and sodium dichromate. Water pH was maintained at about 7.5, and free chlorine residual was about 0.2 milligrams per liter.

Radionuclide content at the retention basin during sampling by Richards for UNI-946, included the following: cesium-134, plutonium 239/240, cesium-137, strontium-90, hydrogen-3, nickel-

63, europium-152, europium-154, europium-155, and cobalt-60.

Site Code: 100-K-58 Classification: Rejected (2/13/2001)

Site Names: 100-K-58, 100-KE Service Water ReClassification:

Pipelines, 100-KE Clean Water Pipelines

Site Type: Process Sewer Start Date: 1957

Site Status: Active End Date:

Site The site is the upstream (pre-reactor) pipelines that carried raw river water from the 181-KE **Description:** Pumphouse to the KE water treatment facilities and carried treated water to the 105-KE Reac

Pumphouse to the KE water treatment facilities and carried treated water to the 105-KE Reactor. The site includes all water lines that connected the different sections of the water treatment plant, but does not include the sulfuric acid or sodium dichromate pipelines, which are on the south side

of the water treatment plant, and it does not include the treated water pipelines running between the 165-KE Building and 105-KE Reactor (these pipes are WIDS site 100-K-79). The site also does not include the reactor cooling lines (100-K-56), Glycol pipelines (100-K-53), or the 1904-K

Process Sewer lines (100-K-47).

The two raw water lines that run between the 181-KE Pumphouse and the 165-KE Control House are constructed of 152-centimeter (60-inch) diameter steel pipe with 1.3-centimeter (0.5-inch)

thick walls.

Waste Type: Water

Waste Description:

The pipelines included carried raw, sanitary, and fire water throughout the 100-KE Area.

Site Code: 100-K-59 Classification: Rejected (2/13/2001)

Site Names: 100-K-59, 100-KW Service Water ReClassification:

Pipelines, 100-KW Clean Water Pipelines

Site Type: Product Piping Start Date: 1957

Site Status: Inactive End Date:

Site Description:

The site is the upstream (pre-reactor) pipelines that carried raw river water from the 181-KW Pumphouse to the KW water treatment facilities and carried sanitary and fire water to various facilities. The site includes all water lines that connected the different sections of the water treatment plant, except for the sulfuric acid and sodium dichromate pipelines on the south side of the water treatment plant, and the treated water pipelines running from the 165-KW Building to the 105-KW Reactor (WIDS site 100-K-79). It includes the sanitary water pipelines connecting the 165 KE and KW Control Houses (to a point half-way between them) and the sanitary water pipeline connecting the 183 KE and KW Head Houses (to a point half-way between them). The site does not include the reactor cooling lines (100-K-55), the 1904-K Process Sewer lines (100-K-60 and 100-K-47), or the Glycol Heat Recovery pipelines (100-K-54).

The two raw water lines that run between the 181-KW Pumphouse and the 165-KW Control House are constructed of 152-centimeter (60-inch) diameter steel pipe with 1.3-centimeter (0.5-inch) thick walls.

Waste Type: Water

Waste Description:

The pipelines included carried raw, sanitary, and fire water throughout the 100-KE Area.

Site Code: 100-K-60 Classification: Accepted

Site Names: 100-K-60, 1904-K Process Sewer (165- ReClassification:

KW)

Site Type: Process Sewer Start Date: 1955

Site Status: Inactive End Date:

Site Description:

This site includes the underground process sewer pipeline that begins at 165-KW and runs up to the point of intersection with the 30.5 and 40.6-centimeter (12 and 16-inch) pipelines coming from 105-KW Reactor. The portion of the sewer that extends from the 165-KW Building to the point of intersection with the 30.5 and 40.6-centimeter (12 and 16-inch) pipelines coming from 105-KW Reactor is a 1.68 by 1.68-meter (66 by 66-inch) concrete sewer.

This site does not include those underground process sewer pipelines that begin at the 105-KE Reactor, the 105-KW Reactor, the 165-KE, the 190-KE, or the 1706-KE, and terminate at the 116-K-3 Outfall. These components of the 1904-K Process Sewer are site 100-K-47. The site has been split because of the different programmatic responsibilities associated with the two sites. The site does not include the facilities where the pipelines terminate, or pipelines that are housed within building structures, which are addressed separately. This site does not include the radioactive process sewer pipelines, water supply pipelines, glycol heat pipelines, or other reactor effluent underground pipelines addressed by other sites.

Waste Type: Process Effluent

Waste Description:

Discharges included overflows from chemical makeup facilities that included chemical additives to reactor cooling water, e.g., aluminum sulfate (alum), with excess hydrated calcium oxide, sulfuric acid, and chlorine. Water pH was maintained at about 7.5, and free chlorine residual was about 0.3 milligrams per liter. Other discharges to the system included: filter backflush waste water; coagulated sediments from the water treatment settling basins; demineralizer regeneration wastes, which included neutralized sulphuric acid and sodium hydroxide; brine wastes from water softeners; and pump cooling waste water.

Site Code: 100-K-61 Classification: Accepted

Site Names: 100-K-61, 117-KW Filter Building **ReClassification:**

Site Type:Process Unit/PlantStart Date:1960Site Status:InactiveEnd Date:1970

Site Description:

The ventilation exhaust filter building houses blowers and particulate filters used to treat the ventilation exhausted from the 105-KW Reactor Building. Included in this site are the 117-KW Building, the intake ventilation duct from the 105-KW Reactor Building, and the exhaust ventilation ducts to the 116-KW Reactor Exhaust Stack. The building and duct work are all made of reinforced concrete, 0.3 to 0.6 meters (1 to 2 feet) thick. The building is 12.2 meters (40 feet) high with 2.4 meters (8 feet) above grade. A soil berm is built up around the building from grade level to the top of the structure. The hatch on the top of the above ground portion of the filter structure is posted as Contamination Area and Danger-Restricted Area, Multiple Hazards.

The building is divided into two large filter cells with a smaller operating area between them. The filter cells each can hold six filter frames (two wide and three deep). The filter frames were designed to hold thirty-six filters that were 0.6 meters (2 feet) square by 0.3 meters (1 foot) thick. There are spaces between the frames to allow access for filter maintenance. The operating area between the two cells is divided into two levels. The upper level, called the access gallery has ten doors that lead from it. Four doors open into each of the filter cells and the two other doors provide access to the intake and exhaust ducts. The operating gallery is located below the access gallery. A sump is located at each end of the operating gallery to collect incidental drainage from above. A large open area extends the full length of the structure above the access gallery and the filter cells. It ranges in height between 2.5 and 2.4 meters (8.1 and 7.8 feet) due to the structure's sloping roof. The space provides access to the cement cover blocks that are positioned over each of the filter frames.

Waste Type: Equipment

Waste The building contains radiologically contaminated equipment and surfaces that remain from

Description: when it was in use.

Waste Type: Demolition and Inert Waste

Waste When the 116-KW Reactor Exhaust Stack was shortened, the debris was placed inside the stack. Some debris is probably within the exhaust duct connecting the filter building to the stack.

Site Code: 100-K-62 Classification: Accepted

Site Names: 100-K-62, 117-KE Filter Building **ReClassification:**

Site Type: Process Unit/Plant Start Date: 1960

Site Status: Inactive End Date: 1971

Site Description:

The ventilation exhaust filter building houses blowers and particulate filters used to treat the ventilation exhausted from the KE Reactor Building. Included in this site are the 117-KE Building, the intake ventilation duct from the 105-KE Reactor Building, and the exhaust ventilation ducts to the 116-KE Reactor Exhaust Stack. Most of the filter stuctures are below grade. The building and duct work are all made of reinforced concrete, 0.3 to 0.6 meters (1 to 2 feet) thick. The building is 12.2 meters (40 feet) high with 2.4 meters (8 feet) above grade. The above ground portion of the filter stucture is a soil berm is built up around the building from grade level to the top of the structure. There is an entry hatch on the top of the berm that is posted as Contamination Area and Danger-Restricted Area, Multiple Hazards.

The building is divided into two large filter cells with a smaller operating area between them. The filter cells each can hold six filter frames (two wide and three deep). The filter frames were designed to hold thirty-six filter that were 0.6 meters (2 feet) square by 0.3 meters (1 foot) thick. There are spaces between the frames to allow access for filter maintenance. The operating area between the two cells is divided into two levels. The upper level, called the access gallery has ten doors that lead from it. Four doors open into each of the filter cells and the two other doors provide access to the intake and exhaust ducts. The operating gallery is located below the access gallery. A sump is located at each end of the operating gallery to collect incidental drainage from above. A large open area extends the full length of the structure above the access gallery and the filter cells. It ranges in height between 2.5 and 2.4 meters (8.1 and 7.8 feet) due to the structure's sloping roof. The space provides access to the cement cover blocks that are positioned over each of the filter frames.

Waste Type: Equipment

Waste The building contains radiologically contaminated equipment and surfaces that remain from

Description: when it was in use.

Waste Type: Misc. Trash and Debris

Waste When the 116-KE Reactor Exhaust Stack was shortened, the debris was placed in the "below

Description: ground interior portion" of the stack. Some debris is probably within the exhaust duct

connecting the filter building to the stack.

Site Code: 100-K-66 Classification: Accepted

Site Names: 100-K-66, 165-KW Power Control Building ReClassification:

Site Type: Control Structure Start Date:

Site Status: Inactive End Date:

Site The building is painted a pink color and has three large stacks on the west end of the building.

Description: This site is a bomb resistant shelter without windows. All ventilation is supplied by fans. The

building is posted Danger- Restricted Area- Asbestos.

Waste Type: Equipment

Waste The building contains asbestos and has been cleaned twice (in 1993) for PCBs.

Description:

Site Code: 100-K-67 Classification: Accepted

Site Names: 100-K-67, 165-KE Power Control Building **ReClassification:**

Site Type: Control Structure Start Date:

Site Status: Active End Date:

Site

Description:

Site Code: 100-K-68 Classification: Accepted

Site Names: 100-K-68, 105-KE Pump Gallery and **ReClassification:**

Catch Tank, D Sump

Site Type: Catch Tank Start Date:
Site Status: Active End Date:

Site The structure is constructed of an 2.44 meter (8 foot) diameter corrugated steel caisson. A vinyl lined concrete catch tank is located at the bottom of the caisson. Located above the catch tank, is

a pump gallery containing two sump pumps and a ladder for access. The total length of the caisson is 10.87 meters (35.67 feet) and extends from just above grade level at elevation 141.58 meters (464.50 feet) to elevation 131.32 meters (430.83 feet). The top of the caisson is covered

with a conical 12 gauge sheet metal roof with a hatch for access.

Waste Type: Water

Waste Waste water from 105-KE Spent Fuel Storage Basin sub-basin drainage header.

Description:

Site Code: 100-K-69 Classification: Accepted

Site Names: 100-K-69, 105-KE Sump C ReClassification:

Site Type:SumpStart Date:Site Status:ActiveEnd Date:

Site The structure is a concrete sump that receives water from the 105-KE fuel storage basin floor drains in the transfer area. Two electric powered sump pumps return the drain water to the basin.

Waste Type: Process Effluent

Waste

Description:

Site Code: 100-K-70 Classification: Accepted

Site Names: 100-K-70, 105-KE Waste Storage Tank, **ReClassification:**

Holding Tank

Site Type: Storage Tank Start Date: 1974

Site Status: Active End Date:

Site The site is a steel storage tank for the 105-KE Spent Fuel Storage Basin radioactive drains. The

Description: tank is buried under a 1.8 meter (6 foot) deep earth berm. An absolute filter is located on the east

end of the tank and a tank level gauge is located on the west end of the tank.

Waste Type: Process Effluent

Waste **Description:**

Site Code: 100-K-71 **Classification:** Accepted

100-K-71, 105-KE Collection Box **ReClassification: Site Names:**

Start Date: 1953 Site Type: Diversion Box

Site Status: Active **End Date:**

Site The 105-KE Collection Box collects effluent from nine underground process sewer lines that **Description:** originate in the 105-KE Reactor Building. The effluent exits the Collection Box via 12 inch cast

iron and a 16 inch cast iron process sewer pipelines. Sewer pipelines entering the "Collection Box" include the following: Six inch clean drain, 10 inch contaminated drain, 10 inch potentially contaminated drain, 6 inch rod cooling water, 6 inch drain to pluto crib, 12 inch basin drain line, 8 inch basin overflow line, 6 inch vent line, and 4 inch vitrified clay tile decon drain to filter.

Waste Type: Process Effluent

Waste The collection box received waste water from the contaminated drain, potentially contaminated **Description:**

drain, clean drain, drain to pluto crib, basin drain line, ink system drain, rod cooling water drain,

floor drains, the decon drain to filter and basin overflow drain.

Site Code: 100-K-72 Classification: Accepted

Site Names: 100-K-72, 105-KW Pump Gallery and **ReClassification:**

Catch Tank, D Sump

Site Type: Catch Tank **Start Date: Site Status:** Active **End Date:**

Site The structure is constructed of a 2.4 meter (8 foot) diameter corrugated steel caisson. A vinyl

Description: lined concrete catch tank is located at the bottom of the caisson. Located above the catch tank, is

a pump gallery containing two sump pumps and a ladder for access. The total length of the caisson is 11 meters (35 feet 8 inches) and extends from just above grade level at elevation 464.50

feet to elevation 430.83 feet.

Waste Type: Water

Waste water from 105-KE Spent Fuel Storage Basin sub-basin drainage header. Waste

Description:

Site Code: 100-K-73 **Classification:** Accepted

100-K-73, 105-KW Collection Box **Site Names:** ReClassification:

Site Type: Diversion Box **Start Date: End Date: Site Status:** Active

The 105-KW Collection Box collects effluent from nine underground process sewer lines that Site

originate in the 105-KW Reactor Building. The effluent exits the Collection Box via 30 **Description:**

centimeter (12 inch) cast iron and a 41 centimeter (16 inch) cast iron process sewer pipelines. Sewer pipelines entering the "Collection Box" include the following: 15 centimeter (6 inch) clean drain, 25.4 centimeter (10 inch) contaminated drain, 25.4 centimeter (10 inch) potentially

contaminated drain, 15 centimeter (6 inch) rod cooling water, 15 centimeter (6 inch) drain to pluto

crib, 30 centimeter (12 inch) basin drain line, 20 centimeter (8 inch) basin overflow line, 15 centimeter (6 inch) vent line, and 10 centimeter (4 inch) vitrified clay tile decon drain to filter.

Waste Type: Process Effluent

The collection box received waste water from the contaminated drain, potentially contaminated Waste

drain, clean drain, drain to pluto crib, basin drain line, ink system drain, rod cooling water drain, **Description:**

floor drains, the decon drain to filter and basin overflow drain.

100-K-74 **Site Code: Classification:** Accepted

100-K-74, 105-KW Waste Storage Tank, **Site Names: ReClassification:**

Holding Tank

Site Type: Storage Tank **Start Date: Site Status:** Active **End Date:**

The site is a steel storage tank for the 105-KW Spent Fuel Storage Basin radioactive drains. The Site

tank is buried under a 1.8 meter (6 foot) deep earth berm. An absolute filter is located on the east **Description:**

end of the tank and a tank level gauge is located on the west end of the tank.

Waste Type: Process Effluent

Waste

Description:

100-K-75 **Classification: Site Code:** Accepted

Site Names: 100-K-75, 105-KW Sump C ReClassification:

Site Type: Sump **Start Date: Site Status:** Active **End Date:**

Site The structure is a concrete sump that receives water from the 105-KW fuel storage basin floor

drains in the transfer area. Two electric powered sump pumps return the drain water to the basin **Description:**

and/or the underground holding tank.

Waste Type: Water

Waste

Description:

Site Code: 100-K-76 **Classification:** Rejected (4/10/2002)

Site Names: 100-K-76, 105-KW Unplanned Release **ReClassification:**

Discovered Near 130-KW-1 Emergency

Diesel Tank

Unplanned Release **Start Date:** 1992 **Site Type:**

Site Status: Inactive **End Date:**

Site This site is a duplicate of 130-KW-1. The site is the location of two removed underground diesel **Description:**

storage tanks. The 'unplanned release' is the radiation contamination detected when the tanks were excavated. The excavated tank site has been backfilled with uncontaminated soil to grade

and covered with gravel. There is no separate radiological posting. However, the 100-KE/KW

Reactor Areas are posted Underground Radioactive Material on the perimeter fences.

Waste Type: Soil

Waste The site contains radioactively contaminated soil.

Description:

The Site Was Consolidated With:

Site Code: 130-KW-1

Site Names: 130-KW-1, 105-KW Emergency Diesel Oil Storage Tank, 130-KW-1A/130-KW-1B Tanks, 105-

KW Emergency Diesel Fuel Tank

Reason: Duplicate Site

Site Code: 100-K-77 Classification: Accepted

Site Names: 100-K-77, Underground Railroad Ties **ReClassification:**

Southeast of 1706KE

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

The site is railroad ties discovered at the bottom of an excavation. The excavation measured approximately 2.9 meters by 3.1 meters by 2.1 meters deep (9.5 feet by 10 feet by 6.9 feet deep).

The site has been backfilled, and the railroad ties at the bottom of the excavation were left in

place, but the sidewall braces were probably removed prior to backfilling.

Waste Type: Misc. Trash and Debris

Waste Buried railroad ties.

Description:

Site Code: 100-K-79 Classification: Accepted

Site Names: 100-K-79; Sodium Dichromate and Sulfuric **ReClassification:**

Acid Product Pipelines at 100-K

Site Type:Product PipingStart Date:Site Status:InactiveEnd Date:

Site This site includes:

Description:

1) the sodium dichromate product pipelines that run from the railroad offloading area to the dichromate storage tanks and then to the adjacent 183.1 Headhouses, at both KE and KW.
2) the sulfuric acid product pipelines that run from the sulfuric acid storage tanks to the 183.1

Headhouses, and the adjacent railroad offloading area, at both KE and KW, and

3) the treated water pipelines that run from the 165 Power Control Buildings to the 105 Reactors,

also at both KE and KW.

Waste Type: Equipment

Waste The waste is residual sodium dichromate (chromium 6) and mercury (from sulfuric acid) in the

Description: pipes and potential leaks from the offloading station.

Site Code: 100-K-82 Classification: Discovery

Site Names: 100-K-82, 100-KW Fuel Storage Basin leak ReClassification:

Site Type:Unplanned ReleaseStart Date:1974Site Status:InactiveEnd Date:1978

Site The release is not marked or posted.

Description:

Waste Type: Water

Waste Fuel storage basin effluent that included debris from fuel cladding failures. The release is analogous to the release at 105-KE basin. Cobalt-60, Strontium-90, Cesium-137 and small

amounts of plutonium were noted in the soil beneath the 105- K East basin.

Site Code: 118-K-1 Classification: Accepted

Site Names: 118-K-1, 100-K Burial Ground, 118-K ReClassification:

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1975

Site The site runs northwest and southwest and contains numerous pits, trenches, and silos. The trench

Description: and pit dimensions vary greatly.

Waste Type: Equipment

Description:

Waste This unit contains numerous trenches and vertical steel pipes of various sizes that contain **Description:** radioactive solid waste from 105-K and 105-N Reactors. The incinerator operated for several

years burning low-level contaminated combustible material. All contaminated burning was

halted in October 1960.

Site Code: 126-K-1 Classification: Accepted

Site Names: 126-K-1, 100-K Gravel Pit ReClassification:

Site Type: Inert/Demolition Landfill Start Date: 1975

Site Status: Active End Date:

Site This unit is a gravel borrow pit that resulted from 100-K Area construction. The slope of the

southwest corner contains demolition waste. This area is covered with pit run backfill material. The bottom contains one layer approximately 1.5-meter (5-foot) thick of demolition and inert waste covered with approximately 0.3 meters (1 foot) of pit run backfill material. Approximately

80% of this unit is unused.

Waste Type: Demolition and Inert Waste

Waste The unit contains demolition and inert waste from the 100-K Area, the Near Surface Test **Description:** Facility (NSTF) at Gable Mountain, and the Exploratory Shaft (ES) Site. Waste consists

primarily of concrete, wood, steel pipe, structural steel, conduit, and wire.

Site Code: 128-K-1 Classification: Accepted

Site Names: 128-K-1, 100-K Burning Pit ReClassification:

Site Type:Burn PitStart Date:1955Site Status:InactiveEnd Date:1971

Site The site is a slight depression, about 0.91 meters (three feet) below the surrounding grade, with

Description: pieces of debris (mostly concrete and metal) showing at the surface.

The site has been backfilled to the surrounding grade with clean fill material. A field visit on March 19, 2003 verified that the location has been covered over with soil by heavy equipment. As of March 19, 2003, the site is slowly revegetating with cheatgrass and rabbitbrush, but much of the ground is covered by small cobbles and is poor for vegetation growth.

Waste Type: Misc. Trash and Debris

Waste The site was used for the disposal of nonradioactive, combustible materials, such as paint waste,

Description: office waste, and chemical solvents.

Site Code: 128-K-2 Classification: Accepted

Site Names: 128-K-2, 100-K Construction Dump ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site has not been covered with fill. A single chain fence with asbestos warning signs marks

Description: the area.

Waste Type: Misc. Trash and Debris

Waste A wide variety of trash is exposed on the ground surface. There is evidence of burning in many locations. Most of the material on the surface is scrap metal and glass. Office waste, paint,

solvents, laboratory waste have also been found. The area is also covered with nonfriable and

friable asbestos.

Site Code: 130-K-1 Classification: Rejected (10/1/1997)

Site Names: 130-K-1, 1717-K Gasoline Storage Tank **ReClassification:**

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1972

SiteThe site was an underground gasoline storage tank oriented with the long axis of the tank in an east-west direction. A 6.4 centimeters (2.5 inches) pipeline connected the tank to the building. The tank was emptied and rinsed with water when the facilities were deactivated in 1971.

The concrete pad over the top of the tanks was removed in July, 1989. This allowed Pacific Northwest Laboratories to return to the tank site and perform Underground Penetrating Radar

(UPR) to aid in locating the tank without the interference caused by the rebar in the concrete.

The tank was excavated in July 1989. The soil around where the tanks had been located was sampled, the results analyzed, and the site backfilled to match the surrounding grade.

Waste Type: Oil

Waste Description:

The unit was used for storage of gasoline (product).

Site Code: 130

130-K-2 Classification: Accepted

Site Names: 130-K-2, 1717-K Waste Oil Storage Tank **ReClassification:**

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1972

Site Description:

The site was an underground waste oil storage tank oriented with the long axis of the tank in a north-south direction. The tank was used for storing used motor oil. The tank was left with a residual heel when the facilities were deactivated in 1971.

The concrete pad over the top of the tanks was removed in July 1989. This allowed Pacific Northwest Laboratories to return to the tank site and perform Underground Penetrating Radar (UPR) to aid in locating the tank without the interference caused by the rebar in the concrete.

The tank was excavated in July 1989. The soil around where the tanks had been located was sampled, the results analyzed, and the site backfilled to match the surrounding grade.

Waste Type: Oil

Waste The unit was used for storage of used motor oil.

Description:

Site Code: 130-K-3 Classification: Rejected (10/1/1997)

Site Names: 130-K-3, 182-K Emergency Diesel Oil **ReClassification:**

Storage Tank, 130-K-3A and 130-K-3B

Site Type:Storage TankStart Date:1961Site Status:InactiveEnd Date:1970

Site Description:

The unit consisted of two steel underground diesel oil storage tanks. The tanks were used to supply diesel fuel to three engines located within the 182-K (Emergency Water Pump House). The engines ran emergency pumps used to provide backup cooling water for the 105-KE and 105-KW Reactors.

The tanks were covered by a bermed mound of soil with the top of the mound 1.5 meters (5 feet) above grade level. The top of each tank was 1.2 meters (3.5 feet) above grade and covered by 0.46 meters (1.5 feet) of the soil berm. A 0.7 meters (2 feet) diameter manway (0.64 centimeters [0.25 inches] thick bolted steel plate cover) was located in the center of each tank. All piping associated with the tanks utilized welded joints with no threaded couplings. The piping and conduit associated with each tank was: 3 fuel oil pipelines -- 3.2 centimeters (1.25 inches) outside diameter by 3.7 meters approximately (12 feet) to the building; 1 fuel oil return pipeline -- 0.64 centimeters (3 inches) outside diameter by approximately 4.6 meters (15 feet) to the building (empty during normal operation); 1 centrifuge fuel oil pipeline -- 3.2 centimeters (1.25 inches) outside diameter by approximately 9.1 meters (30 feet) to the building; 1 vent pipeline -- 0.64 centimeters (3 inches) outside diameter by approximately 6.1 meters (20 feet) (including above ground components); 1 vertical fill pipeline connection -- 10.2 centimeters (4 inches) outside diameter by 15.2 centimeters (6 inches) tall (empty during normal operation); 1 fuel oil cross tie pipeline -- 7.6 centimeters (3 inches) outside diameter by approximately 3.05 meters (10 feet) long (empty during normal operation); 1 fuel level indicator conduit -- electrical and did not contain product.

There was no history of repairs made to these tanks.

In about 1970, the tanks were pumped empty of product and abandoned.

The tanks were excavated on April 13, 1993 following the Site Assessment Process. The soil around where the tanks had been located was sampled, the results analyzed, and the site was backfilled to match the surrounding grade.

Waste Type: Oil

Waste The two tanks were used for storage of diesel oil (product).

Description:

Site Code: 1607-K1 **Classification:** Accepted

Site Names: 1607-K1, 1607-K1 Septic Tank and ReClassification:

Associated Drain Field, 124-K-1, 1607-K1 Sanitary Sewer System, 1607-K1 Septic

Tank

Septic Tank 1955 **Site Type: Start Date:**

Active **End Date: Site Status:**

Site The sanitary sewer system is composed of a septic tank, leaching trench and associated piping.

The septic tank and dosing chamber are composed of reinforced concrete per Hanford Standard E-**Description:** 5-11. There is a maximum of 1.5 meters (5 feet) of fill on the cover slab. There are 61 meters (200 feet) of 15 centimeter (6 inches) vitrified clay pipe to the septic tank, followed by 6.1 meters (20 feet) of 15 centimeter (6 inches) vitrified clay pipe to the leaching trench. The leaching trench

contains 9.1 meters (30 feet) of 15 centimeters (6 inches) vitrified clay pipe laid with open joints.

Waste Type: Sanitary Sewage

Waste This unit receives sanitary sewage from 1701-K Badgehouse (security checkpoint), 1720-K **Description:**

Patrol Offices and Change Room, and 1721-K Trailer. The flow rate to this unit is estimated to

have been 1,987 liters (525 gallons) per day.

Site Code: 1607-K2 **Classification:** Accepted

Site Names: 1607-K2, 1607-K2 Septic Tank and **ReClassification:**

> Associated Drain Field, 124-KE-1, 1607-K2 Sanitary Sewer System, 1607-K2 Septic

Tank

Site Type: Septic Tank **Start Date:** 1955

Site Status: Active **End Date:**

The sanitary sewer system is composed of a septic tank, leaching trench and associated piping. Site

The septic tank is composed of steel per Hanford Standard E-5-11. There is a maximum of 1.5 **Description:** meters (5 feet) of fill on the cover slab. There are 26 meters (85 feet) of 15 centimeter (6 inches)

vitrified clay pipe to the septic tank, followed by 6.1 meters (20 feet) of 15 centimeter (6 inches) vitrified clay pipe to the leaching trench. The leaching trench contains 33.5 meters (110 feet) of

15 centimeters (6 inches) vitrified clay pipe laid with open joints.

Waste Type: Sanitary Sewage

This unit receives sanitary sewage from 183-KE Water Treatment Plant. The flow rate is Waste

Description: estimated to have been 1230 liters (325 gallons) per day.

Site Code: 1607-K3 Classification: Accepted

ReClassification: **Site Names:** 1607-K3, 1607-K3 Septic Tank and

Associated Drain Field, 124-KW-2, 1607-K3 Sanitary Sewer System, 1607-K3 Septic

Tank

Septic Tank 1955 **Site Type: Start Date:** 1970 Inactive **End Date: Site Status:**

The tank and drain field are enclosed within a wooden fence and marked with Septic Tank and Site

Description: Drain Field signs.

Waste Type: Sanitary Sewage

This unit received sanitary sewage from 183-KW Water Treatment Plant. The flow rate is Waste

Description: estimated to have been 1,230 liters (325 gallons) per day.

1607-K4 **Site Code: Classification:** Accepted

Site Names: 1607-K4, 1607-K4 Septic Tank and **ReClassification:** Closed Out (3/5/2001)

> Associated Drain Field, 124-K-2, 1607-K4 Sanitary Sewer System, 1607-K4 Septic

Tank

Site Type: Septic Tank **Start Date:** 1955

Site Status: End Date: Inactive

Site The sanitary sewer system is composed of a septic tank, two leaching trenches and associated **Description:** piping. The septic tank and dosing chamber are composed of reinforced concrete per Hanford

Standard E-5-11. There is a maximum of 1.5 meters (5 feet) of fill on the cover slab. There are 149 meters (150 + 238 + 102 feet) of 20 centimeter (8 inches) vitrified clay pipe to the septic tank, followed by 6.1 meters (20 feet) of 15 centimeter (6 inches) vitrified clay pipe to the larger leaching trench. There are an additional 68 meters (122 + 102 feet) of 15 centimeter (6 inches) of vitrified pipe connecting 1717-K to the system. The leaching trench contains 128 meters (420 feet) of 15 centimeters (6 inches) vitrified clay pipe laid with open joints. The second leaching trench is connected directly to the system piping with 6.1 meters (20 feet) of vitrified piping. The

piping within the leach trench is a single 9.1 meters (30 feet) of vitrified piping.

Waste Type: Sanitary Sewage

This unit received sanitary sewage from the 1704-K Office Building and the 1717-K Waste

Description: Maintenance Shop.

Site Code: 1607-K5 Classification: Accepted

ReClassification: Site Names: 1607-K5, 1607-K5 Septic Tank and

> Associated Drain Field, 124-KE-2, 1607-K5 Sanitary Sewer System, 1607-K5 Septic

Tank

Site Type: Septic Tank Start Date: 1955

Site Status: Active End Date:

Site The unit includes a tile field.

Description:

Waste Type: Sanitary Sewage

Waste This unit receives sanitary sewage from 1706-KER Flow Laboratory, 1706-K Water Treatment Laboratory, 165-KE Powerhouse, 105-KE Reactor Building, and 115-KE Gas Recirculation

System. The flow rate to this unit is estimated at 700 gal/d.

Site Code: 1607-K6 Classification: Accepted

Site Names: 1607-K6, 1607-K6 Septic Tank and **ReClassification:**

Associated Drain Field, 124-KW-1, 1607-K6 Sanitary Sewer System, 1607-K6 Septic

Tank

Site Type: Septic Tank Start Date: 1955

Site Status: Active End Date:

Site The unit includes a tile field and the piping from the facilities to the tile field.

Description:

Waste Type: Sanitary Sewage

Waste This unit receives sanitary sewage from 105-KW Reactor Building, 115-KW Gas Recirculation

Description: Building, and 165-KW Powerhouse.

Site Code: 116-KE-1 Classification: Accepted

Site Names: 116-KE-1, 115-KE Condensate Crib **ReClassification:**

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1971

Site The base of the crib is 1.8 meters (6 feet) in diameter and is positioned 7.8 meters (25.5 feet)

Description: below the ground surface. The top of the crib measures 12.2 meters (40 feet) in diameter. The crib is filled with coarse gravel to 3 meters (10 feet) above the base. The remainder of the crib is

backfilled with dirt to grade. The crib is currently covered with gravel. The site includes the feed

pipeline coming from the 115-KE Building.

Waste Type: Process Effluent

Waste The site received condensate and other waste from reactor gas purification systems. Beta/gamma Description: concentrations within the crib, taken from two sample boreholes drilled in 1976, range from

4.5E+05 picocuries per gram to 8.6E+05 picocuries per gram. The radionuclide inventory curies decayed through April 1, 1986, includes tritium (56.5 curies), carbon-14 (110 curies), and

small amounts of other elements.

Site Code: 116-KE-2 Classification: Accepted

Site Names: 116-KE-2, 1706-KER Waste Crib **ReClassification:**

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

feet) rests 0.9 meters (3 feet) above the bottom of an excavation. The length and width of the excavation measured approximately 9.1 meters (30 feet) by 9.1 meters (30 feet) at grade and 4.9 meters (16 feet) by 4.9 meters (16 feet) at the base, and was 10.5 meters (34.5 feet) deep. The bottom 3 meters (10 feet) of the excavation was filled with crushed stone then backfilled. The distribution pipes enter the crib structure 7 meters (23 feet) below grade. The side slope ratio was 1:1. The site also includes two 5.1-centimeter (20-inch) steel schedule 40 pipelines that terminate at the west wall of the 1706-KER Building approximately 6.1 meters (20 feet) below grade. The pipelines are approximately 55 meters (180 feet) long.

A wooden crib structure of dimensions 3 meters (10 feet) by 3 meters (10 feet) by 3 meters (10

Waste Type: Process Effluent

Waste Description:

The site received wastes from cleanup columns in the 1706-KER loop. Drilling in the mid-1970's next to the crib revealed concentrations of radionuclides in the soil. The total estimated concentration was 38 curies. The radionuclide inventory decayed through April 1, 1986, was estimated at approximately 14.6 curies, and is composed predominantly of cobalt-60 and strontium-90. Approximately 100,000 kilograms (220,500 pounds) of sodium hydroxide may have been disposed of into the crib as well as 100,000 kilograms (220,500 pounds) of sulfuric acid.

Site Code: 116-KE-3 Classification: Accepted

Site Names: 116-KE-3, 105-KE Storage Basin French ReClassification:

Drain, 105-KE Fuel Storage Basin Sub-Basin Drainage Disposal System Crib

Site Type:Injection/Reverse WellStart Date:1955Site Status:InactiveEnd Date:1971

Description:

The site is part of the sub-basin drainage disposal system for the 105-KE Fuel Storage Basin (100-K-42). The site includes the following components: a feed pipe, crib structure, dry well, and test hole.

The area of the site is cobble covered and posted with "Underground Radioactive Material" warning signs. A mound of soil, installed in 1977 or 1978, is located nearby and covers some of the ancillary units related to this site. The test hole's 10.2-centimeter (4-inch) diameter steel casing that originally extended above finish grade level is no longer visible.

A 20.3-centimeter (8-inch) corrugated galvanized steel feed pipe 8.8 meters (29 feet) below grade comes from the fuel storage basin. The feed pipe enters the crib structure at elevation 133 meters (435.5 feet).

The crib structure, in plan view, is trapezoid shaped with the top at grade level (Elevation: 142 meters [464.5 feet]) and approximately 18.3 meters (60 feet) in width (excavation and backfill width) and the bottom (Elevation: 425.5 feet) 3.05 meters (10 feet) in width. The bottom 3.7 meters (12 feet) of the crib is filled with coarse gravel.

The distribution system (drain field) within the crib is a central feeder with side feeders ("fishbone") located 8.8 meters (29 feet) below grade. All feeder piping is composed of 20.3-centimeter (8-inch) corrugated and perforated galvanized steel pipe. The main feeder pipe within the drain field is 6.1 meters (20 feet) long. The side feeders coming from each side of the central feeder are 2.7 meters, 3.2 meters, 2.6 meters, and 1.5 meters (9.0 feet, 10.5 feet, 8.5 feet, and 5.0

feet) in length, 1.75 meters, 1.7 meters, and 1.3 meters (5.75 feet, 5.5 feet, 4.25 feet) apart, and set at an angle of 30 degrees (Drawing #H-1-23207 is labeled 30 degrees, however, it appears on the drawing to be closer to 60 degrees.) The drain field is 6.1 meters (20 feet) in diameter.

A dry well (injection well) was installed at the midpoint (Washington State Plane Coordinates: Easting 569130.985, Northing 146753.534) of the drain field main feeder pipe. The dry well is constructed of 20.3-centimeter (8-inch) schedule 40 steel well casing. The dry well casing runs from elevation 435.5 feet (8.8 meters/29 feet below grade) downward to a point 3.05 meters (10 feet) below the mean water table. The bottom 6.1 meters (20 feet) of the well casing is perforated.

The 10.2-centimeter (4-inch) steel test hole extended from the surface to the head end of the drain field. The test hole piping was the only part of site's structure that was above grade. The construction of the "D" catch tank modification would have covered the test hole.

Waste Type: Process Effluent

Waste The waste is contaminated structures and soil from the fuel storage basin sub-basin drainage

Description: system.

Site Code: 116-KE-5 Classification: Accepted

Site Names: 116-KE-5, 150-KE Heat Recovery Station **ReClassification:**

Site Type:Process Unit/PlantStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The facility was constructed on a concrete pad and consisted of heat exchangers and associated piping. It was used to transfer heat from the 105-KE Reactor cooling water effluent. The heat recovery stations used an ethylene glycol solution as the heat exchanger medium. The system is no longer intact. The heat exchangers have been removed and are being used elsewhere.

Exposed piping has wooden covers installed over the open ends.

Waste Type: Equipment

Waste Trace amounts of radioactive contamination remain on piping.

Description:

Site Code: 116-KE-6A Classification: Accepted

Site Names: 116-KE-6A, 1706-KE Condensate ReClassification:

Collection Tank, 1706-KE Waste

Treatment System

Site Type: Storage Tank Start Date: 1984

Site Status: Inactive End Date:

Site The unit consists of a 96-gal condensate collection tank, which is part of a system installed in

Description: 1984.

Description:

Waste Type: Equipment

Waste The unit is used to treat radioactive mixed wastes generated in the laboratories of the 1706-KE

Building. The system is used for the treatment of a wide variety of inorganic and organic

laboratory wastes. The majority of these wastes are acidic or caustic solutions; thus, the waste

can be considered a corrosive dangerous waste.

Site Code: 116-KE-6B Classification: Accepted

Site Names: 116-KE-6B, 1706-KE Evaporation Tank, **ReClassification:**

1706-KE Waste Treatment System

Site Type: Storage Tank Start Date: 1984

Site Status: Inactive End Date:

Site The unit consists of a 30-gal evaporation unit, which was part of a system installed in 1984.

Description:

Waste Type: Equipment

Waste The unit is used to treat radioactive mixed wastes generated in the laboratories of the 1706-KE

Description: Building. The system is used for the treatment of a wide variety of inorganic and organic

laboratory wastes. The majority of these wastes are acidic or caustic solutions; thus, the waste

can be considered a corrosive dangerous waste.

Site Code: 116-KE-6C Classification: Accepted

Site Names: 116-KE-6C, 1706-KE Waste Accumulation ReClassification:

Tank, 1706-KE Waste Treatment System

Site Type: Storage Tank Start Date: 1984

Site Status: Inactive End Date:

Site The unit consists of a 550-gal waste accumulating tank, which was part of a system installed in

Description: 1984.

Waste Type: Equipment

Waste The unit is used to treat radioactive mixed wastes generated in the laboratories of the 1706-KE

Description: Building. The system is used for the treatment of a wide variety of inorganic and organic

laboratory wastes. The majority of these wastes are acidic or caustic solutions; thus, the waste

can be considered a corrosive dangerous waste.

Site Code: 116-KE-6D Classification: Accepted

Site Names: 116-KE-6D, 1706-KE Ion Exchange **ReClassification:**

Column, 1706-KE Waste Treatment System

Site Type: Process Unit/Plant Start Date: 1984

Site Status: Inactive End Date:

Site The unit consists of a 5-cu-ft mixed-bed resin ion exchange column, which was part of a system

Description: that was installed in 1984.

Waste Type: Equipment

Waste The unit is used to treat radioactive mixed wastes generated in the laboratories of the 1706-KE

Description: Building. The system is used for the treatment of a wide variety of inorganic and organic

laboratory wastes. The majority of these wastes are acidic or caustic solutions; thus, the waste

can be considered a corrosive dangerous waste.

Site Code: 118-KE-1 Classification: Accepted

Site Names: 118-KE-1, 105-KE Reactor Building ReClassification:

Site Type: Start Date: 1955 Reactor **Site Status: End Date:** 1971 Inactive

Site The unit consists of: 1) a reactor block, which includes the graphite moderator stack, biological

Description: and thermal shields, pressure tubes, and the safety and control systems; 2) the irradiated fuel storage basin; and 3) contaminated portions of the reactor building and remnant contaminated pipelines connected to the buildings and not removed through other remedial actions. The fuel

storage basin is a separate site (100-K-42).

Waste Type: Equipment

Waste The unit contains an estimated 58,000 curies of radionuclides, 151,000 kilograms (167 tons) of

Description: lead, and 708 cubic meters (25,000 cubic feet) of asbestos.

Site Code: 118-KE-2 **Classification:** Accepted

Site Names: 118-KE-2, 105-KE Horizontal Control Rod **ReClassification:**

Storage Cave

Start Date: Site Type: 1955 Storage **Site Status:** Inactive End Date: 1971

The site was constructed by pouring a concrete slab 18 meters (60 feet) long by 2.4 meters (8 feet) Site **Description:**

wide. Two sections of 61-centimeter (24-inch) pipe were cut in half lengthwise, laid open side down on the slab. Vertical concrete walls and steel doors were added to the ends of the pipe sections, with the walls forming a wing at each end. The pipe sections were then covered with 1.8 meters (6 feet) of clean fill material, forming a 12-meter (40-foot) long tunnel (Hale 1957a). The berm width after the fill material was added is approximately 8 meters (25 feet). The entire

structure is above grade.

Waste Type: Equipment

Waste This site contains trace amounts of radionuclides. The radiation level at the entrance to the cave **Description:**

with the door open is 1 millirad/hour. The unit was used for temporary storage of radioactive

rod tips for radioactive decay pending subsequent disposal.

Site Code: 120-KE-1 **Classification:** Accepted

Site Names: 120-KE-1, 183-KE Filter Waste Facility **ReClassification:**

> Dry Well, 100-KE-1, 183-KE Filter Water Facility, 183-KE Acid Neutralization Pit,

100-K-26

Site Type: Sump **Start Date:** 1955 **End Date:** 1971 **Site Status:** Inactive

The site was an underground concrete structure used to neutralize acid waste prior to disposal. Site

The "pit" was a concrete box lined with acid proof bricks. The structure was divided into three **Description:**

sections by dividing brick weirs. Effluent released into the system was held up in a small chamber

by the first weir. Effluent overflowed the first weir into a second small chamber and then

overflowed the second weir into the third larger chamber. A 10.2-centimeter (4-inch) vitrified tile drain was located in the bottom of the third large chamber and is believed to discharge to the process sewer (see Site Comment). The top of the pit was level with the surface and had a 7.6-centimeter (3-inch) plank cover that was posted with "Confined Space" and "Caution, Acid" warning signs. In August 2000, the area around the acid tanks was stabilized with gravel. The french drain and sump were backfilled. They are no longer visible. They are not marked or posted.

Waste Type: Chemicals

Waste The site received sulfuric acid for neutralization and acid sludge waste that was removed from

Description: the sulfuric acid storage tanks in the late 1960's and early 1970's.

Site Code: 120-KE-2 Classification: Accepted

Site Names: 120-KE-2, 183-KE Filter Waste Facility **ReClassification:**

French Drain, 100-KE-2, 183 KE Filter

Water Facility

Site Type:French DrainStart Date:1955Site Status:InactiveEnd Date:1971

Site The unit was an open-bottomed french drain with a depth of 0.9 meters (3 feet) and a diameter of

Description: 0.9 meters (3 feet). It is had been located inside four, yellow posts with chain. In August 2000, the area around the acid tanks was stabilized with gravel. The french drain and sump were

backfilled. They are no longer visible. They are not marked or posted.

Waste Type: Chemicals

Waste The site received sulfuric acid sludge that was removed from sulfuric acid storage tanks.

Description:

Site Code: 120-KE-3 Classification: Accepted

Site Names: 120-KE-3, 100-KE-3, 183-KE Filter Water **ReClassification:**

Facility Trench

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1971

Site The unit was a trench lined with sand. The trench received a sludge-water slurry.

Description:

Waste Type: Chemicals

Waste The site received sulfuric acid sludge that was removed from sulfuric acid storage tanks.

Description:

Site Code: 120-KE-4 Classification: Accepted

Site Names: 120-KE-4, 183-KE1 Sulfuric Acid Storage ReClassification:

Tank

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site

The unit is located above ground and has a storage capacity of 38,267 liters (10,109 gallons).

Description:

Waste Type: Chemicals

Waste

The unit was used for storage of sulfuric acid product.

Description:

Site Code: 120-KE-5 Classification: Accepted

Site Names: 120-KE-5, 183-KE2 Sulfuric Acid Storage

Tank

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The site is the westernmost of the two original sulfuric acid tanks at the 183-KE Headhouse. The tank is a horizontal, cylindrical shaped, steel tank supported above ground on concrete saddles.

ReClassification:

ReClassification:

ReClassification:

The tank has a capacity of 38,267 liters (10,109 gallons).

Site Code: 120-KE-6 Classification: Accepted

Site Names: 120-KE-6, 183-KE Sodium Dichromate

Tank

Site Type:FoundationStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The site is a foundation where a sodium dichromate storage tank was placed. The tank has been removed and all that remains is the concrete pad, contaminated soil, and any remaining piping. The vertical steel storage tank was 6.1 meters (20 feet) high, 5.8 meters (19 feet) in diameter, and had a 159,000-liter (42,000-gallon) storage capacity.

Waste Type: Chemicals

Waste

Staining from sodium dichromate can be seen in the soil near the concrete pad.

Description:

Site Code: 120-KE-8 Classification: Accepted

Site Names: 120-KE-8, 165-KE Brine Pit, 165-KE

Brine Mixing Tank

Site Type:SumpStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The unit is a below grade concrete structure the provided brine for the 165-KE Powerhouse. The roof of the structure is approximately 0.3 meters (1 foot) above ground level. The opening into the pit is covered by a wooden cover that is in poor condition. The bottom of the pit has subsided and appears to have leaked or drained to the soils beneath the structure. Just south of the brine pit is a valve pit located within a vertical section of 1.2 meter (4 foot) diameter corrugated galvanized pipe. This valve pit contains residue and apparently was part of the brine operation.

The brine pit has inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.7 meters (9 feet) tall. The bottom of each pit is filled with a 12.7 centimeter (7 inch) layer of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The pit has a 1.2 meter (4 foot) by 1.1 meter (3.5 foot)

opening for receiving salt.

Waste Type: Chemicals

Waste The unit contains salt brine and residue. Based on sampling performed at the 120-KE-9 and 120-

Description: KW-7 brine pits, the brine and residue may be regulated as dangerous per WAC 173-303.

Site Code: 120-KE-9 Classification: Accepted

Site Names: 120-KE-9, 183-KE Brine Pit, 183-KE Salt ReClassification:

Dissolving Pits and Brine Pump Pit

Site Type:SumpStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The Salt Dissolving Pits and Brine Pump Pit are part of a single below-grade concrete structure that provided brine for the 183-KE Water Treatment Facility. Four wooden covers and one metal cover were visible at the surface. The wooden covers were in poor condition. In August of 1998 the ceiling structures were demolished and the open chambers were backfilled to grade.

The two salt dissolving pits each have inner dimensions of 3.0 meters (10 feet) long by 2.1 meters (7 feet) wide by 2.4 meters (8 feet) deep. A 15-centimeter (6-inch) by 30-centimeter (12-inch) overflow slot that connects the two dissolving pits is located just below the structure's roof. The bottom of each pit was filled with a 13-centimeter (5-inch) layer of 1.3 to 2.6-centimeter (0.5 to 1-inch) gravel topped by a 18-centimeter (7-inch) layer of 0.3 to 0.6-centimeter (1/8 to 1/4-inch) gravel. The dissolving pits each had a 1.8-meter (5.75-foot) by 0.9-meter (3-foot) opening at the top for receiving salt. The pits also had a smaller 46 by 46-centimeter (18 by 18-inch) opening that was probably used for checking the water level within each pit.

The Brine Pump Pit is located adjacent to the two Salt Dissolving Pits. The pit is 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.4 meters (8 feet) deep. It holds two pumps and the associated piping for the brine system. A 46 by 46-centimeter (18 by 18 by 18-inch) sump is located in the corner of the pit. The pump pit is accessible from the surface through a 0.6 by 0.6-meter (2 by 2-foot) opening.

Waste Type: Chemicals

Waste The unit contains salt brine and residue.

Description:

Site Code: 126-KE-2 Classification: Accepted

Site Names: 126-KE-2, 183-KE Liquid Alum Storage ReClassification:

Tank #2

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site Description:

The site is an above ground vertical stainless steel storage tank mounted on a concrete base. The tank was part of a system called, The Liquid Alum System, that supplied liquid alum for water treatment. The liquid was supplied either by rail car or tank truck, as both connections are shown on the Liquid Alum System diagram in HW-24800-103. The piping and instrument identification diagram, H-1-16552, shows the pipelines, valves, and instrumentation related to the tank. During the winter, the liquid alum was pumped through heat exchangers for purpose of heating and agitating the chemicals.

Use of this tank for the storage of alum was discontinued in the Fall of 1996. The tank is now inactive, but the residual alum in the tank has not been cleaned out.

Waste Type: Chemicals

Waste The unit was used for storage of liquid alum (aluminum sulfate). Material Safety Data Sheet (MSDS) #040407 lists aluminum sulfate as an EPA hazardous substance. The tank has not been **Description:**

cleaned out.

Site Code: 126-KE-3 **Classification:** Rejected (2/7/2001)

Site Names: 126-KE-3, 183-KE Liquid Alum Storage **ReClassification:**

Tank #1

Site Type: Storage Tank **Start Date:** 1955 **Site Status:** Inactive **End Date:** 1997

The site is an above ground vertical stainless steel storage tank mounted on a concrete base. The Site

Description: tank was part of a system called the Liquid Alum System that supplied liquid alum for water treatment. The liquid was supplied either by rail car or tank truck, as both connections are shown

on the Liquid Alum System diagram in HW-24800-103. The piping and instrument identification diagram, H-1-16552, shows the pipelines, valves, and instrumentation related to the tank.

Waste Type: Chemicals

The unit was used for storage of liquid alum (aluminum sulfate). Material Safety Data Sheet Waste **Description:** (MSDS) #040407 lists aluminum sulfate as an EPA hazardous substance. It is believed that this

tank has been cleaned out.

130-KE-1

Site Code: Classification: Accepted

130-KE-1, 105-KE Emergency Diesel Oil **Site Names: ReClassification:**

Storage Tank, 105-KE Emergency Diesel

Fuel Tank

Start Date: Site Type: Storage Tank 1955 **Site Status: End Date:** 1971 Inactive

Site The storage tank had a 7,600-liter (2,000 gallon) capacity. Once the storage tank was removed

Description: from the site, the site was backfilled with native soil to grade and covered with gravel.

Waste Type: Oil

Waste The unit was used for storage of diesel fuel (product).

Description:

Site Code: Classification: 130-KE-2 Accepted

ReClassification: Site Names: 130-KE-2, 166-KE Oil Storage Tank

Site Type: Storage Tank **Start Date:** 1955 **Site Status:** Inactive **End Date:** 1971 Site The unit has a storage capacity of 3.04E+06 liters (803,000 gallons), and measures 42.5 meters

Description: (139 feet) by 28.5 meters (93.5 feet) by 7.1 meters (23 feet) deep and is made up of two

components. Approximately 60 centimeters (24 inches) of unusable sludge is present within the

main tank. Approximately 45 centimeters (18 inches) of unusable sludge is present within each

day tank.

Waste Type: Oil

Waste The unit was used for storage of oil (product) for the 165-KE Boilers.

Description:

Site Code: 132-KE-1 Classification: Accepted

Site Names: 132-KE-1, 116-KE Reactor Exhaust Stack ReClassification:

Site Type:StackStart Date:1955Site Status:InactiveEnd Date:1971

Site The original height of this unit was 91.5 meters (300 feet). The current height is 53.4 meters (175

Description: feet).

Waste Type: Demolition and Inert Waste

Waste Discharged ventilated air from the 105-KE Building flowed through concrete ducts directly out

Description: of the stack.

Site Code: 116-KW-1 Classification: Accepted

Site Names: 116-KW-1, 115-KW Condensate Crib ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1971

Site The bottom of the crib is 1.8 meters (6 feet) in diameter and is 7.8 meters (25.5 feet) below the **Description:** ground surface. The top of the crib measures 12.2 meters (40 feet) in diameter. The bottom of

ground surface. The top of the crib measures 12.2 meters (40 feet) in diameter. The bottom of the crib is filled with 3 meters (10 feet) of course gravel, then backfilled with dirt to grade. The crib is currently covered with gravel. This site includes the feed pipeline from the 115-KW

Building.

Waste Type: Process Effluent

Waste The site received condensate and other wastewater from reactor gas purification systems.

Description: Drilling of the crib in the mid-1970's revealed high concentrations of tritium and carbon-14. The

radionuclide inventory in curies decayed through April 1, 1986, includes tritium (81.9 curies),

carbon-14 (110 curies), and small amounts of other elements.

Site Code: 116-KW-2 Classification: Accepted

Site Names: 116-KW-2, 105-KW Storage Basin French ReClassification:

Drain, 105-KW Basin Reverse Well, 105-KW Fuel Storage Basin Sub-Basin Drainage Disposal System Crib

Site Type: Injection/Reverse Well Start Date: 1955

Site Status: Inactive End Date: 1970

Site Description:

The site is part of the sub-basin drainage disposal system for the 105-KW Fuel Storage Basin (100-K-43). The site includes the following components: a feed pipe, crib structure, dry well, and test hole.

The area of the site is cobble covered and posted with "Underground Radioactive Material" warning signs. A mound of soil, installed in 1977 or 1978, is located nearby and covers some of the ancillary units related to this site. The test hole's 10.2-centimeter (4-inch) diameter steel casing that originally extended above finish grade level is no longer visible.

A 20.3-centimeter (8-inch) corrugated galvanized steel feed pipe 8.8 meters (29 feet) below grade comes from the fuel storage basin. The feed pipe enters the crib structure at elevation 133 meters (435.5 feet).

The crib structure, in plan view, is trapezoid shaped with the top at grade level (Elevation: 142 meters [464.5 feet]) and approximately 18.3 meters (60 feet) in width (excavation and backfill width) and the bottom (Elevation: 425.5 feet) 3.05 meters (10 feet) in width. The bottom 3.7 meters (12 feet) of the crib is filled with coarse gravel.

The distribution system (drain field) within the crib is a central feeder with side feeders ("fishbone") located 8.8 meters (29 feet) below grade. All feeder piping is composed of 20.3-centimeter (8-inch) corrugated and perforated galvanized steel pipe. The main feeder pipe within the drain field is 6.1 meters (20 feet) long. The side feeders coming from each side of the central feeder are 2.7 meters, 3.2 meters, 2.6 meters, and 1.5 meters (9.0 feet, 10.5 feet, 8.5 feet, and 5.0 feet) in length, 1.75 meters, 1.7 meters, and 1.3 meters (5.75 feet, 5.5 feet, 4.25 feet) apart, and set at an angle of 30 degrees (Drawing #H-1-23207 is labeled 30 degrees, however, it appears on the drawing to be closer to 60 degrees.) The drain field is 6.1 meters (20 feet) in diameter.

A dry well (injection well) was installed at the midpoint (Washington State Plane Coordinates: Easting 568589.544, Northing 146473.534) of the drain field main feeder pipe. The dry well is constructed of 20.3-centimeter (8-inch) schedule 40 steel well casing. The dry well casing runs from elevation 435.5 feet (8.8 meters [29 feet] below grade) downward to a point 3.05 meters (10 feet) below the mean water table. The bottom 6.1 meters (20 feet) of the well casing is perforated.

The 10.2-centimeter (4-inch) steel test hole extended from the surface to the head end of the drain field. The test hole piping was the only part of site's structure that was above grade. The construction of the "D" catch tank modification would have covered the test hole.

Waste Type: Process Effluent

Waste The waste is contaminated structures and soil from the fuel storage basin sub-basin drainage

Description: system.

Site Code: 116-KW-4 Classification: Accepted

Site Names: 116-KW-4, 150-KW Heat Recovery Station **ReClassification:**

Site Type:Process Unit/PlantStart Date:1955Site Status:InactiveEnd Date:1970

Site The unit consisted of heat exchangers, pumps, and associated piping on a concrete pad. Disconnected piping remains at the site and the pipe ends are covered with plywood.

Waste Type: Equipment

Waste Trace amounts of radioactive contamination remain on the piping. The heat exchange medium

Description: consisted of a 34% ethylene glycol-water solution.

Site Code: 118-KW-1 Classification: Accepted

Site Names: 118-KW-1, 105-KW Reactor Building **ReClassification:**

Site Type:ReactorStart Date:1955Site Status:InactiveEnd Date:1970

Site The unit consists of: 1) a reactor block, which includes the graphite moderator stack, biological

Description: and thermal shields, pressure tubes, and the safety and control systems; 2) the irradiated fuel storage basin; and 3) contaminated portions of the reactor building and remnant contaminated

pipelines connected to the buildings and not removed through other remedial actions.

Waste Type: Equipment

Waste This unit contains an estimated 51,000 curies of radionuclides, 1.41E+05 kilograms (155 tons)

Description: of lead, and 708 cubic meters (25,000 cubic feet) of asbestos.

Site Code: 118-KW-2 Classification: Accepted

Site Names: 118-KW-2, 105-KW Horizontal Control **ReClassification:**

Rod Storage Cave

Site Type:StorageStart Date:1955Site Status:InactiveEnd Date:1971

Site The cave was constructed by pouring a concrete slab 18.3 meters (60 feet) long by 2.4 meters (8

Description: feet) wide. Two sections of 0.61-meter (24-inch) pipe were cut in half lengthwise and laid open

side down, on the slab. Vertical concrete walls and steel doors were added to the ends of the pipe sections, with the walls forming a wing at each end. The pipe sections were then covered with 1.8 meters (6 feet) of clean fill material, forming a 12.2-meter (40-foot) long tunnel. The berm width after the fill material was added is about 7.6 meters (25 feet). The entire structure is above grade.

Waste Type: Equipment

Description:

Waste The unit was used for temporary storage of irradiated and radioactively contaminated horizontal

control rods containing unknown quantities of radionuclides. The tunnel contains four rod tips and other rod removal components. The radiation reading at the entrance to the cave with the

door open is 50 millirad/hour.

Site Code: 120-KW-1 Classification: Accepted

Site Names: 120-KW-1, 183-KW Filter Water Facility **ReClassification:**

Dry Well, 100-KW-1, 183-KW Acid

Neutralization Pit, 100-K-17

Site Type:SumpStart Date:1955Site Status:InactiveEnd Date:1970

Site The site was an underground concrete structure used to neutralize acid waste prior to disposal.

Description: The "pit" was a concrete box that is lined with acid proof bricks. The structure is divided into

three sections by dividing brick weirs. Effluent released into the system was held up in a small chamber by the first weir. Effluent overflowed the first weir into a second small chamber and then overflowed the second weir into the third larger chamber. A 10.2-centimeter (4-inch) vitrified tile drain was located in the bottom of the third chamber and is believed to discharge to the process sewer (see Site Comment). The top of the pit was level with the surface and had a 7.6centimeter (3-inch) plank cover that is posted with "Confined Space" and "Caution, Acid" warning signs. In August 2000, the area around the acid tanks was stabilized with gravel. The french drain and sump were backfilled. They are no longer visible. They are not marked or posted.

Waste Type: Chemicals

Waste **Description:** The site received sulfuric acid for neutralization and acid sludge waste from the sulfuric acid storage tanks. The drywell sludge was sampled in 1985 and was analyzed for arsenic, barium, cadmium. Chromium, lead, mercury, silver and selenium. The sample taken from the 183-KW drywell contained elevated levels of mercury. The Washington State dangerous waste limit for mercury is 0.2 parts per million. The sample contained 0.387 parts per million of mercury. The other metals were below dangerous waste limitations.

Site Code: 120-KW-2 **Classification:** Accepted

120-KW-2, 183-KW Filter Water Facility **ReClassification: Site Names:**

French Drain, 100-KW-2

Site Type: French Drain **Start Date:** 1955 **Site Status:** Inactive **End Date:** 1970

This unit was an open-bottomed french drain with a depth of 0.9 meters (3 feet) and a diameter of Site

> 0.9 meters (3 feet). In August 2000, the area around the acid tanks was stabilized with gravel. The french drain and sump were backfilled. They are no longer visible. They are not marked or

posted.

Waste Type: Chemicals

Waste The site received sulfuric acid sludge that was removed from sulfuric acid storage tanks.

Description:

Description:

Site Code: 120-KW-3 **Classification:** Accepted

Site Names: 120-KW-3, 183-KW1 Sulfuric Acid **ReClassification:**

Storage Tank

1955 Site Type: Storage Tank **Start Date:** 1970 **Site Status:** Inactive **End Date:**

The site is the westernmost of the two original sulfuric acid tanks at the 183-KW Headhouse. The Site tank is a horizontal, cylindrical-shaped, steel tank supported above ground on concrete saddles. **Description:**

The tank has a capacity of 38,267 liters (10,109 gallons).

Waste Type: Chemicals

Waste

Description:

Site Code: 120-KW-4 Classification: Accepted

Site Names: 120-KW-4, 183-KW2 Sulfuric Acid ReClassification:

Storage Tank

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1970

Site The unit is an above ground sulfuric acid storage tank and has a capacity of 38,000 liters (10,109)

Description: gallons). The site is the easternmost of the two original sulfuric acid tanks at the 183-KW

Headhouse. The tank is a horizontal, cylindrical-shaped, steel tank supported above ground on

concrete saddles.

Waste Type: Chemicals

Waste The unit was used for storage of sulfuric acid product.

Description:

Site Code: 120-KW-5 Classification: Accepted

Site Names: 120-KW-5, 183-KW Sodium Dichromate ReClassification:

Storage Tank

Site Type:FoundationStart Date:1955Site Status:InactiveEnd Date:1971

Site The site is a foundation where a sodium dichromate storage tank was placed. The tank has been **Description:** removed and all that remains is the concrete pad, contaminated soil, and any remaining piping.

The vertical steel storage tank was 6.1 meters (20 feet) high, 5.8 meters (19 feet) in diameter, and

had a 1.59E+05-liter (42,000-gallon) storage capacity.

Waste Type: Chemicals

Waste Staining from sodium dichromate can be seen in the soil near the concrete pad.

Description:

Site Code: 120-KW-6 Classification: Accepted

Site Names: 120-KW-6, 165-KW Brine Pit, 165-KW ReClassification:

Brine Mixing Tank

Site Type:SumpStart Date:1955Site Status:InactiveEnd Date:1970

Site The unit is a below grade concrete structure that provided brine for the 165-KW Powerhouse.

Description: The roof of the structure was approximately 0.3 meters (1 foot) above ground level. The opening

into the pit was covered by a wooden cover. Just south of the brine pit is a valve pit located within a vertical section of 1.2-meter (4-foot) diameter corrugated galvanized pipe. This valve pit contains residue and apparently was part of the brine operation. In August 1998, remaining liquid

was removed and the open pit was backfilled to grade.

The brine pit has inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.7 meters (9 feet) tall. The bottom of each pit is filled with a 13-centimeter (7-inch) layer of 1.3 to 2.6-centimeter (0.5 to 1-inch) gravel topped by a 18-centimeter (7-inch) layer of 0.3 to 0.6-centimeter (1/8 to 1/4-inch) gravel. The pit has a 1.2-meter (4-foot) by 1.1-meter (3.5-foot)

opening for receiving salt.

Waste Type: Chemicals

Waste The unit contains salt brine and residue. Based on sampling performed at the 120-KE-9 and 120-**Description:**

KW-7 Brine Pits, the brine and residue may be regulated as dangerous waste per Washington

Administrative Code (WAC) 173-303.

Site Code: 120-KW-7 **Classification:** Accepted

120-KW-7, 183-KW Brine Pit, 183-KW **ReClassification: Site Names:**

Salt Dissolving Pits and Brine Pump Pit

Start Date: 1955 Site Type: Sump **Site Status: End Date:** 1970 Inactive

Description:

The Salt Dissolving Pits and Brine Pump Pit were part of a single below grade concrete structure that provided brine for the 183-KW Water Treatment Facility. Four wooden covers and one metal cover were visible at the surface. The wooden covers are in poor condition. The unit contained saltcake and brine. In August 1998, remaining liquid was removed and the unit was backfilled to grade.

The two salt dissolving pits each have inner dimensions of 3.0 meters (10 feet) long by 2.1 meters (7 feet) wide by 2.4 meters (8 feet) deep. A 15-centimeter (6-inch) by 30-centimeter (12-inch) overflow slot that connects the two dissolving pits is located just below the structure's roof. The bottom of each pit was filled with a 12.7-centimeter (5-inch) layer of 1.3 to 2.6-centimeter (1/2 to 1-inch) gravel topped by a 17.8-centimeter (7-inch) layer of 0.3 to 0.6-centimeter (1/8 to 1/4-inch) gravel. The dissolving pits each had a 1.8-meter (5.75-foot) by 0.9-meter (3-feet) opening at the top for receiving salt. The pits also had a smaller 46 by 46-centimeter (18 by 18-inch) opening that was probably used for checking the water level within each pit.

The Brine Pump Pit is located adjacent to the two Salt Dissolving Pits. The pit is 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.4 meters (8 feet) deep. It holds two pumps and associated piping for the brine system. A 46 by 46-centimeter (18 by 18 by 18-inch) sump is located in the corner of the pit. The pump pit is accessible from the surface through a 0.6 by 0.6-meter (2 by 2-foot) opening.

Chemicals **Waste Type:**

Waste **Description:** The unit contains salt brine and residue. A minimal sampling was performed at the site. The brine samples were analyzed by Hanford Environmental Health Foundation (HEHF) on September 5, 1989. A sample from one of the dissolving pits was described as a light yellow water-miscible liquid with approximately 1% yellow/orange residue and a pH of 6. The sample contained 12.5% sodium ion, 19.8% chloride ion, and 33 milligrams/liter potassium. The measured concentrations of EP-Toxicity metals were 0.12 milligrams/liter arsenic, 1.3 milligrams/liter barium, 0.1 milligrams/liter cadmium, 0.78 milligrams/liter chromium, 0.58 milligrams/liter lead, 0.28 milligrams/liter selenium, and 0.66 milligrams/liter silver. All other analytes were below detection limits. A sample from the other dissolving pit was also described as a very light yellow water-miscible liquid with approximately 10% white and tan crystals and a pH of 6. The sample contained 7.9% sodium ion, 19.7% chloride ion, and 240 milligrams/liter potassium. The measured concentrations of EP-Toxicity metals were 0.14 milligrams/liter arsenic, 1.9 milligrams/liter barium, 0.57 milligrams/liter chromium, 0.72 milligrams/liter lead, 0.31 milligrams/liter selenium, and 0.58 milligrams/liter silver. All other analytes were below detection limits. Only the liquid portions of the samples were analyzed. An informal review of results by the Sitewide Hazardous Waste Engineering Support Unit (SHWES) indicated that the brine and residue may be regulated as Dangerous Waste per Washington Administrative Code (WAC) 173-303.

Site Code: 130-KW-1 Classification: Accepted

Site Names: 130-KW-1, 105-KW Emergency Diesel Oil ReClassification:

Storage Tank, 130-KW-1A/130-KW-1B Tanks, 105-KW Emergency Diesel Fuel

Tank

Site Type:Storage TankStart Date:1960Site Status:InactiveEnd Date:1971

Site The site is the location of two underground diesel storage tanks that were removed in 1992.

Description: Although the location description states the diesel tanks were located between the 105-KW

exhaust stack and the 119-KW building, a sign is posted at the northwest corner of the 115 KW building that reads "130-KW-1 Diesel Tanks" This is further east and south of the reactor stack. There is no visual evidence of the tanks in either location. The site has been backfilled with uncontaminated soil to grade and covered with gravel. There is a very large Underground Radioactive Material area that surrounds the reactor facility. This site is not separately posted or

marked.

Waste Type: Soil

Waste The tanks were used for storage of diesel fuel (product). Radioactive contamination was discovered on the exterior of both tanks when they were removed. The Organic Vapor Monitor

readings were below the detection limit.

The Following Sites Were Consolidated With This Site:

Site Code: 100-K-76

Site Names: 100-K-76, 105-KW Unplanned Release Discovered Near 130-KW-1 Emergency Diesel Tank

Reason: Duplicate Site

Site Code: 130-KW-2 Classification: Accepted

Site Names: 130-KW-2, 166-KW Oil Storage Tank **ReClassification:**

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1970

Site The unit has a storage capacity of 6.2E+06 liters (1.65E+06 gallons).

Description:

Waste Type: Oil

Waste The tank was used for storage of oil (product) for the 165-KW Boilers.

Description:

Site Code: 132-KW-1 Classification: Accepted

Site Names: 132-KW-1, 116-KW Reactor Exhaust Stack ReClassification:

Site Type:StackStart Date:1955Site Status:InactiveEnd Date:1970

Site The original height for this unit was 91.5 meters (300 feet). The current height is 53.4 meters

Description: (175 feet).

Waste Type: Demolition and Inert Waste

Waste Discharged ventilation air from the 105-KW Building flowed through concrete ducts directly out

Description: the exhaust stack.

Site Code: 600-4 Classification: Accepted

Site Names: 600-4, Howitzer Site ReClassification: Rejected (10/1/1997)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is a dumping area left from its use as a military encampment. It includes a garbage dump,

Description: the remains of old military tent city, gun emplacements, two small water towers, and scattered

debris.

A portion of a large gravel pit, located approximately 525 meters (1722 feet) south of Route 1 and west of the railroad tracks that are located closest to the entrance to 100-K, was used as the garbage dump. A wooden loading ramp was used to dump the garbage. To the northwest is the remains of the old military tent city.

Earth mounds topped with wooden decks surround the site. Presumably these structures are lookout platforms. On the south side of the site, one of the platforms is on top of what appears to be soils removed from the trench that traverses the site. This would indicate that the site was emplaced after the trench was dug and would account for the trench being backfilled at the center of the site.

The trench that traverses the site from northwest to southeast may have been the location of a temporary water supply pipeline that ran from the pre-Hanford Allard pumping station to the 200 North Area and the Central Electrical Control Station located in the 200 North Area. The entire length of this trench was traced for the Technical Baseline Document (WHC-SD-EN-TI-239).

At least three large wooden bunkers with earthen berms surrounding the sides were also located in the area. The wooden roofs, made up of 20.3 centimeter by 20.3 centimeter (8 inch by 8 inch) beams have collapsed into the structures. The overall site covers an area of approximately 6.07 hectares to 8.1 hectares (15 to 20 acres).

Waste Type: Misc. Trash and Debris

Waste This unit contains various types of solid wastes including old food containers, 18.9 liter (5 pascription: gallon) gas and oil cans, empty ammo crates (confirmed to be empty), and two piles of coal

approximately 6.1 meters (20 feet) in diameter. In addition to old military containers and ammo boxes, a 18.9 liter (5 gallon) drum with holes in the bottom was found. The drum was partially buried and appeared to be some type of french drain or sanitary sewage facility (latrine).

Site Code: 600-29 Classification: Accepted

Site Names: 600-29, 100-K Construction Lay-down **ReClassification:**

Area, 100-K-41

Site Type: Dumping Area Start Date: 1952

Site Status: Inactive End Date: 1954

Site Description:

burning sites. There are many areas of discolored soil that include coal, rust colored soil and white residue patches. Slightly south of a gravel road that transverses the site is some type of scientific experiment that includes two partially buried drums attached to a solar panel. South of 100-KW is a cement building foundation with a portion of it enclosed in a chain link fence. The foundation has two french drains, one near the north side and one near the east side. In the southwest corner of the foundation are plumbing holes indicating bathroom facilities. It is

The unit is an abandoned dumping area containing several rectangular depressions and waste

possible a septic tank may also be located nearby.

Waste Type: Construction Debris

Waste Unit wastes consist of miscellaneous metals, wood, cans, bottles, construction hardware and materials, what appears to be tar dumped on the ground, buckets and mops covered with what

appears to be tar, a 18.725-liter (5-gallon) bucket of oily rags, broken pieces of a toilet bowl,

what appears to be asbestos and transite, and wire rope.

Site Code: 600-55 Classification: Accepted

Site Names: 600-55, Paved Area and Collapsed Structure ReClassification: Rejected (10/1/1997)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is a dumping area that consists of an asphalt paved area which may have been a parking

Description: lot, miscellaneous farm debris and a collapsed wooden building. The pre-Hanford farm debris is

scattered approximately 135 meters (443 feet) to the east of the paved area. There is also a cellar and an old stove near the collapsed wooden structure.

Waste Type: Misc. Trash and Debris

Waste The miscellaneous debris at the site consists of asphalt paving, empty paint and paint solvent

Description: containers, an empty antifreeze container, a fan belt, wood, and metal.

Site Code: UPR-100-K-1 Classification: Accepted

Site Names: UPR-100-K-1, 100-KE Fuel Storage Basin ReClassification:

leak, UN-100-K-1

Site Type: Unplanned Release Start Date: 1974
Site Status: Inactive End Date: 1979

Site The site is not marked or posted on the surface.

Description:

Waste Type: Water

Waste The fuel storage basin effluent included contaminates from fuel cladding failures. Cobalt-60,

Description: Strontium-90, Cesium-137 and small amounts of plutonium were noted in the soil beneath the

105- K East basin.

100-NR-1

100-N-1 **Site Code: Classification:** Accepted

100-N-1, HGP Settling Pond **ReClassification: Site Names:**

Site Type: Pond **Start Date:** 1965 1993 **Site Status:** Inactive **End Date:**

Site The settling pond was cut into the side of a steep slope leading to the river. The unit is dry and **Description:** has a rusty-colored bottom. The soil type is sandy with cobble-sized rock and no vegetation exists

in the pond. A concrete flume is located at the south end of the site. An outlet valve and pipe are

located on the west side of the site. The site is posted with Contamination Area signs.

Waste Type: Process Effluent

Waste The pond operated concurrently with the Hanford Generating Plant (HGP) and received process water from the plant that contained trace oxygen scavenging conditioners such as morpholine, **Description:**

hydrazine and ammonia. Sampling has indicated elevated levels of chromium, lead, nickel, calcium, copper, zinc and ammonia. Trace surface radioactive contamination is detectable.

Site Code: 100-N-3 **Classification:** Accepted

Site Names: 100-N-3, Maintenance Garage French **ReClassification:**

Drain, Maintenance Garage Waste Water

Treatment Unit

French Drain **Start Date:** 1965 Site Type:

End Date: Site Status: Active

The unit is marked by a 3-meter (10-foot) square barricade and gravel covering a 31-meter (100-

foot) square surface. A 1.2-meter (4-foot) diameter steel plate covers the center. **Description:**

Waste Type: Oil

The unit received petroleum wastes. Waste

Description:

Site Code: 100-N-4 **Classification:** Accepted

100-N-4, HGP Tile Field **ReClassification: Site Names:**

Drain/Tile Field **Start Date:** 1966 **Site Type:**

Site Status: End Date: Inactive

The site is marked with yellow wooden posts and chain. The unit is located in a depression, **Description:** approximately 0.3 meters (10 feet) below grade and slopes gently toward the HGP Settling Pond.

Soil at the site is rocky and cheatgrass is growing on the surface.

Waste Type: Sanitary Sewage

The unit received sanitary sewage and lab waste. Testing for corrosion inhibitors hydrazine and Waste

Description: morpholine were performed in the lab. It is likely that reagents used for these tests were

discharged to the unit.

Site Code: 100-N-5 Classification: Accepted

Site Names: 100-N-5, HGP Disposal and Storage Area, **ReClassification:**

HGP Bone Yard, SWMU #10

Site Type: Storage Start Date:
Site Status: Active End Date:

Site Material and equipment is stored inside the southwest corner of the Hanford Generating Plant

Description: facility fence. Some of the material includes scrap metal, electrical equipment, pipes and cables. The unit is located on a level area which has several spots of stressed or absent vegetation. Some

of the soil is oil stained. Garnet sandblasting grit is also present.

Waste Type: Construction Debris

Waste The unit contains scrap iron, brass, copper, electrical components, piping, cable, and

Description: miscellaneous pieces of metal equipment. The site also contains oil stains, sand blasting grit,

and ion exchange resin beads on the soil.

Site Code: 100-N-6 Classification: Accepted

Site Names: 100-N-6, 128-N-1, 128N-FS-3 ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site In 1994, the site appeared to have been leveled and scraped.

Description:

Waste Type: Misc. Trash and Debris

Waste In 1992 soil samples were collected and analyzed for the 100-NR-1 Remedial

Description: Investigation/Corrective Measures Study (RI/CMS). Field screening were less than detectable

for volatile organic compounds (VOC), total petroleum hydrocarbons (TPH), and

polychlorinated biphenyls (PCB). Heavy metals and metal-complexed compounds did not differ

from background.

Site Code: 100-N-7 Classification: Rejected (9/11/2000)

Site Names: 100-N-7, 182-N Facility Liquid Unplanned **ReClassification:**

Release (remediated)

Site Type: Unplanned Release Start Date: 1987
Site Status: Inactive End Date: 1987

Site The release site consists of a concrete flume on the river bank that extends into the river. The

Description: release at this site was approximately 19 liters (5 gallon) of oil that was mixed with a continuous

permitted water discharge. The oil was dispersed into the river with the rest of the permitted discharge from the flume. The flume is currently dry and there is no evidence of the release.

Waste Type: Oil

Waste Description:

Site Code: 100-N-8 Classification: Accepted

Site Names: 100-N-8, 108-N Facility, 108-N CUF ReClassification: Rejected (9/11/2000)

Site Type:Loading DockStart Date:1963Site Status:InactiveEnd Date:1990

Site The 108-N Chemical Unloading Facility (CUF) was designed to remove liquids from railroad

Description: cars. The 108-N Building, metal structure used to offload chemicals, tank foundations, and tank pit are part of this site and remain at the location. The ground surface around these facilities is

graveled.

Waste Type: Chemicals

Waste The site received 93% sulfuric acid, and 50% sodium hydroxide solutions.

Description:

Site Code: 100-N-9 Classification: Accepted

Site Names: 100-N-9, 120-N-5 Facility Liquid ReClassification: Rejected (9/11/2000)

Unplanned Release 1 (08/07/87)

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The site is a concrete-lined neutralization pit and acid/caustic transfer trench. There is no

Description: remaining evidence of the spill at the site.

Waste Type: Chemical Release

Waste The unplanned release was sulfuric acid.

Description:

Site Code: 100-N-10 Classification: Accepted

Site Names: 100-N-10, 120-N-5 Facility Liquid ReClassification: Rejected (9/11/2000)

Unplanned Release 2 (09/02/87)

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The release occurred at the 120-N-5 Acid/Caustic Transfer Trench. There is no remaining

Description: evidence of the spill at the concrete-lined trench.

Waste Type: Chemical Release

Waste The site received caustic sodium hydroxide.

Description:

Site Code: 100-N-11 Classification: Accepted

Site Names: 100-N-11, 120-N-5 Transfer Trench Liquid ReClassification: Rejected (9/11/2000)

Unplanned Release 3

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The site is the soil adjacent to 120-N-5, a concrete-lined neutralization pit and acid/caustic

Description: transfer trench. There is no remaining evidence of the spill at the site.

Waste Type: Chemical Release

Waste The site received an estimated 57 to 114 liters (15 to 30 gallons) of sulfuric acid.

Description:

Site Code: 100-N-12 Classification: Rejected (Proposed)

Site Names: 100-N-12, 166-N / 184-N Pipelines Liquid ReClassification:

Unplanned Release 1 (10/14/87 cleaned up)

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The site is a leak of fuel oil found contained in a drain trench, inside the 184-N Facility. The oil **Description:** was absorbed and the trench cleaned up immediately. The Auxiliary Operations Supervisor for N-

Reactor at the time, Joe Zoric, said the spill did not reach the drain at the far end of the trench.

Waste Type: Oil

Waste

Description:

Site Code: 100-N-13 Classification: Accepted

Site Names: 100-N-13, Contaminated Soil Solid Waste ReClassification:

Site 1

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is posted at four corners with "Underground Radioactive Material" signs. Approximately

Description: 0.3 to 0.6 meters (1 to 2 feet) of soil has been placed on top of the site.

Waste Type: Soil

Waste A May 1993 radiation survey identified the presence of cobalt-60 at the site. A photograph from

Description: about 1963 shows a dark circular area (possibly a burn pit) in the vicinity of this site. A 1988

photo shows a crane (possibly regulated) parked in the vicinity of this site.

Site Code: 100-N-14 Classification: Accepted

Site Names: 100-N-14, Contaminated Soil Solid Waste **ReClassification:**

Site 2

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is posted at four corners with "Underground Radioactive Material" signs. Approximately

Description: 0.3 to 0.6 meters (1 to 2 feet) of soil has been placed on top of the site.

Waste Type: Soil

Waste Description:

Site Code: 100-N-16 Classification: Accepted

Site Names: 100-N-16, Burn Pit 1, 128N-FS-2 ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site appears as a 18 meters (20 yards) by 18 meters (20 yards) semi-cleared circular area.

Description: Ash is evident on the surface and the area is covered with glass, wire, coil, pipe, tin cans, metal,

and other burned debris.

Waste Type: Misc. Trash and Debris

Waste Nonhazardous waste (paper, wood, trash) generated at 100-N were burned here. In 1992 soil samples were collected and analyzed for the 100-NR-1 Remedial Investigation/Corrective

Measures Study (RI/CMS). Field screening samples were less than detectable for volatile organic compounds (VOC) and total petroleum hydrocarbons (TPH). Heavy metals and metal-

complexed compounds did not differ from background. The site tested positive for

polychlorinated biphenyls (PCBs).

Site Code: 100-N-17 Classification: Accepted

Site Names: 100-N-17, Burn Pit 2, 128N-FS-1 ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site is covered with gravel, cobbles and dead tumbleweeds. Much of the site has been

Description: backfilled with fill material

Waste Type: Misc. Trash and Debris

Waste Nonhazardous waste (paper, wood, trash) generated at 100-N were burned here. Other **Description:** combustible materials such as vegetation, office wastes, tools, hardware, and possibly page 100-100.

combustible materials such as vegetation, office wastes, tools, hardware, and possibly paints and solvents have been burned at this site. In 1992 soil samples were collected and analyzed for the 100-NR-1 Remedial Investigation/Corrective Measures Study (RI/CMS). Field screening samples were less than detectable for volatile organic compound (VOC), total petroleum

hydrocarbons (TPH), and polychlorinated biphenyls (PCB). Heavy metals and metal-complexed

compounds did not differ from background.

Site Code: 100-N-18 Classification: Accepted

Site Names: 100-N-18, Hanford Generating Plant Burn **ReClassification:**

Pit, HGP Burn Pit

Site Type: Burn Pit Start Date:

Site Status: Inactive End Date: 1989

Site The site shows evidence of burning including charred wood and burned metal. Vegetation at the

Description: site is sparse with a few rabbitbrush plants.

W. ... T. ... Mi... T....l. ... I D.l....

Waste Type: Misc. Trash and Debris

Waste Soil samples were collected from disturbed areas of the pit and analyzed using field screening

Description: methods. Samples tested contained less than detectable concentrations of volatile organic compounds (VOCs), heavy metals, total petroleum hydrocarbons (TPH), and polychlorinated

biphenyls (PCBs).

Site Code: 100-N-19 Classification: Accepted

Site Names: 100-N-19, HGP Construction Debris Dump **ReClassification:**

Solid Waste Site, SWMU #11

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a large area consisting of a series of pits and depressions containing soil, rock,

Description: concrete, metal, wood, and asphalt that have been dumped in the area over time. The site is

relatively long [more than 1000 meters (3000 feet) long] and narrow [about 150 meters (500 feet)

wide] in shape.

Waste Type: Construction Debris

Waste The site contains mounds of soil, rock, concrete, metal, wood, and asphalt that have been

Description: dumped in the area..

Site Code: 100-N-21 Classification: Accepted

Site Names: 100-N-21, Blast Yard Solid Waste Site, ReClassification: Rejected (9/11/2000)

1143-N Blast Yard

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The area has thin, scattered patches of red garnet sandblasting material. Paint chips, reported in

Description: 1994 as being mixed in with the garnet (Cote 1994), are no longer visible. The site is in use as a

parking lot.

Waste Type: Soil

Waste The area has scattered patches of red garnet sandblasting material.

Description:

Site Code: 100-N-22 Classification: Accepted

Site Names: 100-N-22, Sanitary Sewer System **ReClassification:**

(Undocumented), 1705-N Septic Tank and

Cesspool

Site Type: Septic Tank Start Date:
Site Status: Inactive End Date:

Site A 1.1-meter (3.5-foot) metal cover with a confined space posting is at ground-level in the general

Description: area of the underground site.

Waste Type: Sanitary Sewage

Waste Description:

Site Code: 100-N-23 Classification: Accepted

Site Names: 100-N-23, Resin Disposal Pit Liquid Waste **ReClassification:**

Site 1

Site Type: Process Pit Start Date:
Site Status: Inactive End Date:

Site The overflow sump appears as an open rectangular pit with a 61-centimeter (24-inch) drain pipe

Description: protruding from the north side of the pit.

Waste Type: Chemicals

Waste According to site personnel, the pit was used to dispose of resin generated in the 163-N

Description: Demineralized Water Plant. The pit later served as the clearwell overflow up until about

Demineralized Water Plant. The pit later served as the clearwell overflow up until about 1990. Although it is not used for that purpose anymore, it could be used on an emergency basis. On May 5, 1980 and January 1976 the overflow sump received neutralized waste that was pumped

from cleanup actions for an acid spill that occurred on the 108-N/163-N Transfer Line.

Site Code: 100-N-24 Classification: Accepted

Site Names: 100-N-24, Hydrogen Dry Well Liquid **ReClassification:**

Waste Site, Hydrogen Peroxide Drywell

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Status: Inactive End Date:

Site The site is identified by a buried vertical concrete pipe with a 0.83-meter (2.75-foot) diameter **Description:** steel cover. The hydrogen peroxide drywell is a non-reinforced concrete pipe of 0.83-meters

(2.75-feet) above a subchamber 2.53 meters (8.3 feet) in diameter. The subchamber is set in a gravel pocket 3.35 meters (11 feet) in diameter. Welded wire fabric cells 15 centimeters (6

inches) by 10.1 centimeters (4 inches) were within the subchamber.

Waste Type: Chemicals

Waste The waste is the predominantly concrete and metal structure of the hydrogen peroxide drywell.

Description: The site received 50 percent hydrogen peroxide and water from the hydrogen peroxide sump

under the hydrogen peroxide tank located in the 109-N Decontamination Facility. The solution

used for washing down of the storage tank area.

Site Code: 100-N-25 Classification: Accepted

Site Names: 100-N-25, French Drain 1 Liquid Waste ReClassification:

Site (100N TBR 4.86)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has a 0.9-meter (3-foot) diameter metal cover at grade. The surrounding area is covered

Description: with gravel.

Site Code: 100-N-26 Classification: Accepted

Site Names: 100-N-26, French Drain 2 Liquid Waste **ReClassification:**

Site (100N TBR 4.86)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The vertical concrete pipe extends 5 centimeters (2 inches) above grade and is closed by a vented

Description: metal cover. The surrounding area is covered with gravel.

Waste Type: Steam Condensate

Waste The site receives yard steam condensate.

Description:

Site Code: 100-N-27 Classification: Accepted

Site Names: 100-N-27, 108-N Sump, 108-N ReClassification: Rejected (9/11/2000)

Neutralization Pit

Site Type:SumpStart Date:1963Site Status:InactiveEnd Date:1990

Site The acid neutralization pit is constructed of concrete with a brick lining, and is covered with a

Description: steel lid.

Waste Type: Chemicals

Waste The pit was used to neutralize waste sulfuric acid before eventual release to the river. Chemicals

Description: received by the pit included 93% sulfuric acid and 50% sodium hydroxide.

Site Code: 100-N-28 Classification: Accepted

Site Names: 100-N-28, Resin Disposal Pit Liquid Waste **ReClassification:**

Site 2

Site Type:Process PitStart Date:Site Status:InactiveEnd Date:

Site The site appears as a slight depression around a 1.5-meter (5-foot) square concrete structure that

Description: has a 0.8-meter (2.5-foot) by 0.63-centimeter (0.25-inch) rusted metal cover. The site is

surrounded with four heavy steel posts connected with chain. The steel cover is posted as a confined space. The cover was opened by site personnel revealing a 0.44-meter (17.5-inch) by 0.38-meter (15-inch) solid lead shielding plug with four lifting lugs. The plug was provided as a shield for protection against any radiation that may be contained in the disposed resin charge. Under the plug is a 3.05-meter (10-foot) by 7.62-centimeter (3-inch) diameter pipe leading to the disposal pit. The pit is 5.3 meters (17.5 feet) by 3.8 meters (12.5 feet) by 4.1 meters (13.5 feet) high (including the footing). The pit is lined with 0.38 meters (15 inches) of gravel and concrete masonry block and portland cement mortar. The bottom of the pit contains 0.38 meters (15 inches) of 5 to 7.6-centimeter (2 to 3-inch) gravel. The bottom of the structure is approximately

7.47 meters (24.5 feet) below grade.

Waste Type: Process Effluent

Waste Description:

The waste is the below grade structure, including the lead shield plug, piping to the pit from the 109-N Facility, and the pit structure. Site employees report that the pit was initially used for reactor decontamination waste and may have never actually been used as a resin disposal pit. Documentation (HW-69000-Volume II) states that the Resin Disposal Pit was designed to receive the resin charge from the 109-N Ion Exchanger.

Site Code: 100-N-29 Classification: Accepted

Site Names: 100-N-29, Unplanned Release on 25- **ReClassification:**

centimeter (10-inch) Blowdown Pipeline #1

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The 1300-N Emergency Dump Basin is an open basin that held radioactive water. The area

Description: surrounding it is level and graveled with no vegetation.

Waste Type: Water

Waste An inventory table from an unnumbered document is attached to the listed reference.

Description: Contaminants in the Dump Basin liquid include average concentrations of 6.25 E+05 of H-3,

6.12 E+01of C0-60, 5.70 E+04 of Sr-90, 2.51 E+01 of Zr-95, <5.16 E+01 of Ru-106, 2.16 E+01 of Sb-125, <5.16 E+00 of Cs-134, 9.27 E+02 of Cs-137, 1.62 E-02 of Pu-239 and 1.82 E-01 of

Pu 239/240.

Site Code: 100-N-30 Classification: Accepted

Site Names: 100-N-30, Unplanned Release on 10 inch ReClassification:

Blowdown Pipeline #2

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is a level, graveled area with no vegetation. The area surrounding the dump basin is also

Description: graveled. The site is an open metal basin that held radioactive water.

Waste Type: Water

Waste Contaminants in the Dump Basin liquid include average concentrations of 6.25 E+05 of H-3,

Description: 6.12 E+01 of C0-60, 5.70 E+04 of Sr-90, 2.51 E+01 of Zr-95, <5.16 E+01 of Ru-106, 2.16 E+01

of Sb-125, <5.16 E+00 of Cs-134, 9.27 E+02 of Cs-137, 1.62 E-02 of Pu-239 and 1.82 E-01 of

Pu 239/240.

Site Code: 100-N-31 Classification: Accepted

Site Names: 100-N-31, Unplanned Release on 30 inch **ReClassification:**

Pipe Line

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The unit is an open metal basin that held radioactive water. The surface area has no vegetation

Description: and is level and graveled.

Waste Type: Water

Through process knowledge, it is known that water was slightly chemically treated with Waste

Description: hydrazine and mophaline which are very volatile and most likely not detectable. The water was

radioactively contaminated.

Site Code: 100-N-32 **Classification:** Accepted

Site Names: 100-N-32, Unplanned Release on 25-**ReClassification:**

centimeter (10-inch) Blowdown Pipeline #3

Unplanned Release **Site Type: Start Date: Site Status:** Inactive End Date:

The unit is an open metal basin that held radioactive water. The surface area is level, graveled, Site

Description: and has no vegetation.

Waste Type: Water

Waste

Description:

Site Code: 100-N-33 **Classification:** Accepted

Site Names: 100-N-33, 100-N Military Installation Ash **ReClassification:**

Pit

Coal Ash Pit **Start Date: Site Type: Site Status:** Inactive **End Date:**

The irregularly-shaped site is covered with a dark material that looks like uniform grain-size ash, Site

perhaps the remnants of coal burning. **Description:**

Waste Type: Ash

Waste A description of the waste is not known at this time.

Description:

100-N-34 **Site Code: Classification:** Accepted

Site Names: 100-N-34, Debris site **ReClassification:**

Site Type: Dumping Area Start Date: Site Status: Inactive **End Date:**

The site is an irregular shape with gravel/cobble (some in piles), weedy vegetation, and dead Site **Description:** tumbleweeds (some in piles) present. Construction debris including asphalt, concrete, and metal

pipe are also present.

Waste Type: Misc. Trash and Debris

Waste **Description:**

Site Code: 100-N-35 **Classification:** Rejected (Proposed) **Site Names:** 100-N-35, BPA Hanford Substation,

Hanford Generating Plant (HGP) Substation

ReClassification:

Site Type: Electrical Substation

Start Date: 1971

Site Status: Active

End Date:

Site

The substation consists of a control house, maintenance building, microwave tower, and a

Description: switchyard.

Waste Type: Oil

Waste There is asbestos insulted piping in the basement of the mechanical room. Mineral oil

Description: containing polychlorinated biphenyls and solvents is used during routine equipment maintenance.

Site Code: 100-N-36 Classification: Accepted

Site Names: 100-N-36, 107-N Oil Stained Pad ReClassification:

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site Description:

The site consists of an air compressor pad adjacent to the 107-N Building. The concrete pad and adjacent asphalt are stained with lube oil from the air compressor that was previously installed on

the concrete pad. The surface area is covered with asphalt except for the concrete pad that is

approximately 1.2 meters (4 feet) by 2.4 meters (8 feet).

Waste Type: Oil

Waste T

The waste consists of non-hazardous petroleum product (oil) from air compressor leaks.

Description:

Site Code: 100-N-37 Classification: Accepted

Site Names: 100-N-37, 109-N Asbestos Release **ReClassification:**

Site Type: Unplanned Release Start Date: 1995

Site Status: Inactive End Date:

Site

Description:

Waste Type: Asbestos (non-friable)

Waste

Description:

Site Code: 100-N-38 Classification: Accepted

Site Names: 100-N-38, Unplanned Release at 1300-N **ReClassification:**

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This is an open basin with a steel liner that held radioactive water. The area surrounding the basin

Description: is level, graveled, and has no vegetation.

Waste Tyne Water

masic rype. maici

Waste Description:

Through process knowledge it is known that several water leaks have occurred around and adjacent to the dump basin in the early 1980's. Contaminants in the Dump Basin liquid include average concentrations of 6.25 E+05 of H-3, 6.12 E+01 of C0-60, 5.70 E+04 of Sr-90, 2.51 E+01 of Zr-95, <5.16 E+01 of Ru-106, 2.16 E+01 of Sb-125, <5.16 E+00 of Cs-134, 9.27 E+02 of Cs-137, 1.62 E-02 of Pu-239 and 1.82 E-01 of Pu 239/240.

Site Code: 100-N-39 Classification: Accepted

Site Names: 100-N-39, Hanford Substation Construction **ReClassification:**

Dump Area, SWMU #11

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This site should be rejected because it is a duplicate of 600-32 and contained within the larger dumping area 100-N-19. There is no similar dump near the area originally mapped (in Arcview)

as the site location, inside the BPA Substation fence.

The site is a construction dump with evidence of burning activity. The Hanford Generating Plant RCRA Facility Assessment Report states "The site is a large, irregular shaped burn pit and a large borrow pit covering 5 to 10 acres. The site contains large blocks of concrete and miscellaneous debris."

Waste Type: Construction Debris

WasteThe waste includes construction debris and combustible construction waste that was burned. **Description:**The site contains large blocks of concrete, miscellaneous debris, one empty drum and one pile of

sand blast grit

Site Code: 100-N-40 Classification: Accepted

Site Names: 100-N-40, Unplanned Release at 108-N ReClassification: Rejected (9/11/2000)

Site Type:Unplanned ReleaseStart Date:1987Site Status:InactiveEnd Date:1987

Site The site is a graveled field at the 108-N Chemical Unloading Facility.

Description:

Waste Type: Chemical Release

Waste The waste is sodium hydroxide spilled to the ground.

Description:

Site Code: 100-N-41 Classification: Accepted

Site Names: 100-N-41, 1701-NE Gate House Septic **ReClassification:**

Tank

Site Type:Septic TankStart Date:1965Site Status:InactiveEnd Date:1986

Site The site is a 3-meter (10-foot) square graveled area.

Description:

Wasta Tamas Comitama Comoco

waste type: Sanitary Sewage

Waste Description:

Site Code: 100-N-45 Classification: Accepted

Site Names: 100-N-45, 1703-N Septic Tank ReClassification:

Site Type:Septic TankStart Date:1965Site Status:InactiveEnd Date:1987

Site The unit surface is a 3.0 meter (10 foot) by 3.0 meter (10 foot) square area of gravel with a 15-

Description: centimeter (6-inch) capped pipe at the center.

Waste Type: Sanitary Sewage

Waste Description:

Site Code: 100-N-46 Classification: Accepted

Site Names: 100-N-46, HGP Diesel Oil Storage Tank **ReClassification:**

Site Type: Storage Tank Start Date: 1965

Site Status: Inactive End Date:

Site The site consists of an underground storage tank containing diesel fuel.

Description:

Waste Type: Storage Tank

Waste The site consists of an underground storage tank containing an unknown amount of diesel fuel.

Description:

Site Code: 100-N-47 Classification: Accepted

Site Names: 100-N-47, Military Artillery Site Solid ReClassification:

Waste Site

Site Type:Military CompoundStart Date:Site Status:InactiveEnd Date:

The site is about 610 meter (2,000 feet) long by 210 meter (700 feet) wide, with a portion extending north of the railroad tracks. Locust trees, rabbitbrush, young sagebrush, cheatgrass,

Sipa comata, and Siberian wheatgrass are present at this disturbed site. The installation includes ten separate intact concrete foundations and remnants of at least one other. A number of concrete walkways and remnants of walkways are associated with the foundations. There are remnants of asphalt roadways, parking areas, and piles of broken-up asphalt. There is a 0.6-meter (2-foot) diameter sewer manhole and 3 associated downslope 1.2 by 1.2-meter (4 by 4-foot) square concrete hatchcovers (likely underground sanitary waste holding areas). Strewn through the military artillery site are wood poles, metal cables, wire, metal pipe, glass, paint cans, firehose, metal cans, broken up concrete, concrete blocks, wood pallets, bricks, and transite siding. A number of 0.3-meter (1-foot) diameter wooden poles are standing, and some have been cut off at ground level. On the 6.1-meter (20-foot) by 15.2-meter (50-foot) concrete foundation that is positioned between two 6.1 meter (20 foot) high soil berms, are 31 (41-centimeter [16-inch] wide and 51-centimeter [20-inch] long) hive bodies and supers (bee boxes) left from a Pacific

Northwest Laboratory (PNL) experiment conducted from 1981 to 1984.

Site Code: 100-N-50 Classification: Accepted

Site Names: 100-N-50, HGP Turbine Oil filter Unit, **ReClassification:**

Turbine oil cleaning system

Site Type:Single-Shell TankStart Date:1966Site Status:InactiveEnd Date:1986

Site

Description:

Waste Type: Oil

Waste The filters were periodically changed, but no information was available on the location of their

Description: disposal. This unit likely managed impurities in the turbine oil such as metals.

Site Code: 100-N-51 Classification: Accepted

Site Names: 100-N-51, HGP Building Oil Storage Area ReClassification:

Site Type: Storage Start Date: 1966

Site Status: Inactive End Date:

Site A cinder block room, approximately 2.4 meters (8 feet) by 7.0 meters (23 feet), is located in the **Description:** basement of the Hanford Generating plant (HGP) building along the northwest wall. The room

basement of the Hanford Generating plant (HGP) building along the northwest wall. The room has a fire sprinkler system, steel grate floor, and shelving along the walls. Drums and smaller containers of product (petroleum, oil, and lubricants) are stored on the floor and shelving. A blind

concrete sump (no outlet) is located below the graded floor.

Waste Type: Oil

Waste Used oil and rags from maintenance activities are stored in drums inside the room.

Description:

Site Code: 100-N-52 Classification: Accepted

Site Names: 100-N-52, HGP Gasoline Storage Tank **ReClassification:**

Site Type: Storage Tank Start Date: 1976

Site Status: Inactive End Date:

Site

Description:

Waste Type: Storage Tank

Waste

Description:

Site Code: 100-N-53 Classification: Accepted

Site Names: 100-N-53, 181-N Building Waste Oil Tank **ReClassification:**

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

The site was an empty above-ground waste oil tank. The tank is 1.1 meters (3.5 feet) in diameter Site

Description: and 1.2 meters (4.1 feet) high. A site visit in July 1999 found that the tank has been removed.

Waste Type:

Waste The tank has been removed.

Description:

100-N-54 Classification: Accepted **Site Code:**

100-N-54, 151-N Building Drywell, **ReClassification: Site Names:**

Miscellaneous Stream #727

French Drain **Site Type: Start Date:** 1964 1997 **End Date: Site Status:** Inactive

The site is a french drain, made of 1.2 meter (4 foot) inner diameter and 1.65 meter (5 foot 5 inch) Site

outer diameter concrete pipe, with a steel cover. **Description:**

Waste Type: Water

The site received waste water from the service sink located inside the 151-N building. Waste

Description:

Site Code: 100-N-55 **Classification:** Accepted

100-N-55, 153-N Building Drywell, **ReClassification: Site Names:**

Miscellaneous Stream #728

French Drain **Start Date: Site Type:**

Site Status: Inactive **End Date:** 1997

Site The site is a french drain with a 1.2-meter (4-foot) steel cover. Four yellow steel posts surround

Description: the site, located in a graveled roadway.

Waste Type: Steam Condensate

Waste The site receives steam condensate from a condensate pump and drainage from a service sink

Description: inside the 153-N Building.

Site Code: 100-N-56 **Classification:** Accepted

Site Names: 100-N-56, 181-N Building Drywell **ReClassification:** Rejected (9/11/2000)

Site Type: French Drain **Start Date: Site Status:** Inactive **End Date:**

The drywell is not visible from ground surface and is apparently located underground. The Site

drywell, judging by the site drawing, is adjacent to the fenceline north of the 181-N Building. The **Description:**

ground surface is graveled. Another drywell, 100-N-73 (Miscellaneous Stream 395) is in this

area, but it drains a parking lot north of the 107N Building via a concrete trench.

Waste Type: Water Waste **Description:** River water from inside the 181-N Pumphouse is the only source of waste water to this site.

Site Code: 100-N-57 **Classification:** Accepted

100-N-57, 1304-N Emergency Dump Tank **ReClassification: Site Names:**

1970 **Site Type:** Catch Tank **Start Date:** Inactive **End Date:** 1988 **Site Status:**

Site **Description:** The site is a large tank with a dome-shaped top. The tank is constructed of steel and insulated with asbestos and fiberglass under aluminum sheeting. The bottom portion of insulation has been removed. The area surrounding the tank is posted as a radiological contamination area. The overflow pipe on the southwest side has been disconnected and capped. An access hole has been cut into the south side of the tank and sealed with plywood at ground level.

Waste Type: Misc. Trash and Debris

Waste **Description:**

Between March 14, 1995 and September 29, 1995 approximately 5,300 liters (1,400 gallons) of water, 230 liters (60 gallons) of sand, and 165 bags of debris were removed from the tank. The sectioned piping was left inside the tank and will be removed and disposed of during the

subsequent final decontamination and demolition of the tank. Results from Ion

Chromatography/Inductively Coupled Plasma analysis at the 222-S Laboratory detected levels

of lead and chromium content classified the waste as mixed.

Site Code: 100-N-58 **Classification:** Accepted

Site Names: 100-N-58. South Pond. 120-N South **ReClassification:** Closed Out (3/28/2002)

Settling Pond, 1324-N South Settling Pond

Site Type: Pond **Start Date:** 1977 **End Date:** 1982 **Site Status:** Inactive

The site has been remediated and closed out. Site

Description:

Waste Type: Process Effluent

Waste The 1324N South Settling Pond received regeneration wastes containing aluminum sulfate, **Description:** sulfuric acid, sodium hydroxide solutions and cooling water from the 163-N Building and filter

backwash water from the 183-N Building.

Site Code: 100-N-59 **Classification:** Accepted

Site Names: 100-N-59, Radioactively Contaminated **ReClassification:**

Soil Northeast of 105-NB Building

Start Date: 1995 **Site Type:** Unplanned Release

Site Status: Inactive **End Date:**

The site was a broken, contaminated, underground pipeline. After excavating and repairing the Site **Description:**

broken pipe, the site was marked with a single Underground Radioactive Material sign. A site visit in August 2000 found that the single post with the Underground Radioactive Material sign was gone, but an Underground Radioactive Material sign was attached to the fence near the waste

site.

Waste Type: Soil

Waste The soil was radioactively contaminated when a liquid waste line broke.

Description:

Site Code: 100-N-60 Classification: Accepted

Site Names: 100-N-60, 1314-N Drywell ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

Occurrence Report 73-39 mentions a release of decontamination solutions that overflowed from a catch basin to an adjacent drywell. The drywell was not included in the WIDS database. A field investigation done in 1996 failed to visually locate the drywell as discussed in the referenced occurrence report. The area within the shielding walls of the 1314-N Facility was inspected in addition to the interior of the 1314-N Building from the two doors on the west side of 1314-N. A partially buried catch tank was observed inside the 1314-N Building. It is suspected that the area surrounding the catch tank may have been referred to as the drywell. Drawing H-1-37675, Detail D, shows a 5 centimeter (2 inch) underground drain pipe to a "drywell". It is possible the drywell exists, but cannot be visually verified.

Waste Type: Chemicals

Waste The site received spent decontamination solutions from a railroad waste tank car.

Description:

Site Code: 100-N-61 Classification: Accepted

Site Names: 100-N-61, 100-N Water Treatment and **ReClassification:**

Storage Facilities Underground Pipelines

Site Type:Process SewerStart Date:1963Site Status:InactiveEnd Date:1987

Site Description:

between water treatment facilities and the 105-N Reactor Building. These include all underground lines running between buildings and those that run to drainage facilities. Pipelines within buildings and all pipelines that are downstream from the reactor building, i.e., those lines that carry cooling water from the reactor to effluent disposal facilities such as the dump tank and cribs are excluded.

The site encompasses all underground water pipelines used to transport reactor cooling water

Waste Type: Water

Waste Description:

The waste is steel piping, concrete, and soil (if contaminants are present). Chemical additives to the reactor cooling water included sulfuric acid, sodium hydroxide, aluminum sulfate (alum) with excess hydrated calcium oxide, separan, chlorine, and sodium dichromate. Water pH was maintained at about 7.5, and the free chlorine residual was approximately 0.2 milligrams/liter.

Site Code: 100-N-62 Classification: Accepted

Site Names: 100-N-62, 100-N 105-N, 109-N, 163-N, ReClassification:

182-N, 183-N and 184-N Underground

Pipelines

Site Type:Radioactive Process SewerStart Date:1963Site Status:InactiveEnd Date:1987

Site Description:

This site includes those underground pipelines that transported reactor decontamination chemicals and/or radioactive liquid wastes from the 105-N/109-N Reactor facilities, and other pipelines that have the potential for radioactive contamination that are co-located on the east side of the 105-N/109-N Building complex. It does not include the pipelines that discharge to the 116-N-4 (1300-N), the 1304-N Emergency Dump Tank, pipelines to and from the 107-N and 105-N Buildings, or pipelines from the 105-N/109-N Buildings to the 1908-N Outfall that are addressed by a separate Waste Information Data System (WIDS) entry (100-N-65) for 100-N Reactor 105-N/109-N Cooling Water Effluent Underground Pipelines. Generally these lines leave the 105-N/109-N Buildings on the east side, and proceed in a north-south direction and east-west direction adjacent to the 105-N/109-N Building complex and to their respective treatment/disposal facilities. These pipelines consist of potentially contaminated underground steam and condensate return pipelines including a 0.18-meter (6-inch) decontamination return pipeline, a 0.18-meter (6-inch) radioactive drain, 0.36-meter (14-inch) miscellaneous chemical drains, a 0.61-meter (24-inch) backwash return pipeline, 0.05-meter (2-inch) and 0.08-meter (3-inch) chemical drain pipelines, and 0.08meter (3-inch) radioactive vent, a 0.09 to 0.20-meter (4 to 8-inch) chemical supply pipelines (sodium hydroxide, ammonium hydroxide and phosphoric acid).

Waste Type: Process Effluent

Waste Description:

The waste is the underground pipelines from the east side of the 105-N and 109-N Buildings to the 184-N Powerhouse, 100-N-23 (Resin Disposal Pit Liquid Waste Site 1) and 100-N-24 (Hydrogen Dry Well Liquid Waste Site) waste sites. The chemical drain lines are known to have been used for the disposal of decontamination chemicals, however, specific chemicals and radionuclide content is currently unknown.

Site Code: 100-N-63 Classification: Accepted

Site Names: 100-N-63, 100-N Reactor (1314-N, 116-N- ReClassification:

1 and 116-N-3) TSD Underground Pipelines; 100-N-63:1 Pipeline and concrete encased pipe by-pass structure

Site Type:Radioactive Process SewerStart Date:1963Site Status:InactiveEnd Date:1987

Site Description:

The site encompasses the Treatment, Storage, and Disposal (TSD) underground pipelines that transported reactor cooling water and radioactive liquid wastes from the 105-N Reactor facilities to the 116-N-1 (1301-N), 116-N-3 (1325-N) Crib, and 116-N-2 (1310-N Tank). It does not include the underground pipelines that discharge to the 116-N-4 (1300-N Emergency Dump Basin), 1304-N Emergency Dump Tank, pipelines to and from the 107-N and 105-N Buildings, or pipelines from the 105/109-N Buildings to the 1908-N Outfall that are addressed by a separate Waste Information Data System (WIDS) entry for the 100-N Reactor 105/109-N Cooling Water Effluent Underground Pipelines.

Generally, the pipelines in site 100-N-63 leave the 105-N, 109-N and 1714-NB Buildings on the east, west and north sides, and proceed north-northeast to their respective treatment/disposal facilities. Pipeline sizes beyond the 1322-N Building vary. A 30.5-centimeter (12-inch) radioactive drain originates on the west side of the 109-N Building as a 25.4-centimeter (10-inch) pipeline, it extends north where a 30.5-centimeter (12 inch) disposal system pipeline connects at a point east of the number 3 spacer silo. It proceeds north to a point just east of the 1314-N Building then proceeds east to the 1322-N Building. There it can be diverted south to either the 116-N-2 (1310-N Golfball) via the 1310-N transfer tank or north turning eastward near the 1322-

NC building to the 116-N-1 weir box. From the 1310-N transfer tank (silo) the pipelines continue to the 1310-N Golfball. A third 30.5-centimeter (12 inch) chemical drain pipeline returns from 116-N-2 (Golfball) to the 1310-N transfer tank. From the 116-N-1 weir box a 91.4 centimeter (36 inch) underground pipeline (see subsite 100-N-63:1) connects 116-N-1 to the 1312-N diversion box continuing to the 116-N-3 crib and trench. The final line, a 91.4-centimeter (36-inch) contaminated drain/flush pipeline, originates on the west side of the 105-N Building where it passes under the 1722-N building and continues in a parallel path with the previously discussed 30.5-centimeters (12-inch) radioactive drain pipeline.

Waste Type: Process Effluent

Waste Description:

The waste is the contaminated underground pipelines. The following radionuclides were released from the reactor to the 116-N-1 and/or 116-N-3 Cribs and Trenches, passing through the underground pipelines. Residual contaminants of some radionuclides may be expected to remain in the underground pipelines. These include: tritium, zinc-65, iodine-131, plutonium-238, phosphorous-32, strontium-89/90, xenon-133, plutonium-239/240, chromium-51, zirconium-niobium-95, cesium-134/137, neptunium-239, manganese-54, molybdenum-technetium-99, barium-140, iron-59, ruthenium-103/106, cerium-141, cobalt-58/60, antimony-124/125, and cerium-praseodymium-144. Additionally, decontamination chemicals are known to have passed through the underground pipelines, including phosphoric acid and diethylthiourea

SubSites:

SubSite Code: 100-N-63:1

SubSite Name: 100-N-63:1, Pipeline section from 116-N-1to 116-N-3 Crib including Concrete Encased Pipe

Bypass Structure

Classification: Accepted

ReClassification: Interim Closed Out

Description: The western portion of this pipeline was located between 116-N-1 and the 1312-N Diversion

Box. The effluent flowed through a 448-meter (1,468-foot) long by 0.9-meter (Diameter Nominal [DN] 900) (36-inch) diameter pipeline. Two pipelines continued on from the 1312-N Diversion Box to the north then eastward to the southwest end of the crib. One of the pipelines was a pipe encased concrete by-pass structure that ran parallel to the original. The by-pass structure was built at the same time as the 1312-N Retention Basin (also know as the

1312-N LERF), however, neither was put into service.

This portion of the pipeline 100-N-63:1, approximately 66 meters (216.54 feet) west of 1213-N Diversion Box continuing to the southwest end of the 116-N-3 Crib, has been remediated and closed-out in CVP-2002-00002. For purposes of the CVP/closure report and consistent with the permitted TSD site designation, the 116-N-3 Crib and Trench, the 100-N-63:1 Pipeline, and the bypass structure are collectively referred to as the 116-N-3 site.

Cleanup Verification samples, including QA/QC samples were collected and analyzed for the established contaminants of concern. Shallow zone and deep zone samples were collected between August 24, 2001 and April 8, 2002 and may be viewed on the HEIS database under SAF number B01-090.

Site Code: 100-N-64 Classification: Accepted

Site Names: 100-N-64, 100-N Reactor 105/109-N ReClassification:

Cooling Water Effluent Underground

Pipelines

Site Type:Radioactive Process SewerStart Date:1963Site Status:InactiveEnd Date:1987

Site Description:

This site includes those underground pipelines that transported reactor cooling water from the 105-N Reactor facilities to the 116-N-4 (1300-N), the 1304-N Emergency Dump Basin and Tank respectively, the 107-N Filter Building and the pipelines from these facilities to the 1908-N Outfall Structure. It does not include the underground lines that discharge to the 1301-N (116-N-1) and/or 1325-N (116-N-3) Cribs that are addressed by a separate Waste Information Data System (WIDS) entry for the 105-N Reactor, 1314-N, 116-N-1, and 116-N-3 underground pipelines (site 100-N-63).

Generally these lines leave the 105-N Reactor Building on the west side and proceed to the west to their respective treatment/disposal facilities. The 107-N Building includes return pipelines as well as other process pipelines contained in a concrete encasement between the 105-N and 107-N Buildings. This encasement houses 0.26-meter (10-inch) and 0.46-meter (18-inch) demineralized water lines, a 0.3-meter (12-inch) filtered water line, 1.3-centimeter (0.5-inch) instrument air, 5.1-centimeter (2-inch) steam, 15-centimeter (6-inch) fire, line and telephone, instrument, power, and fire alarm lines. The encasement is about 30 meters (98 feet) long. The remaining underground pipelines associated with the 1300-N and 1304-N include a 0.76-meter (30-inch) flush line, a 0.61-meter (24-inch) vent, a 0.76-meter (30-inch) overflow, a 25.4-centimeter (10-inch) blowdown, and a connection to the 25.4-centimeter (10-inch) radioactive drain line that becomes the 0.3-meter (12-inch) radioactive drain line not included with this waste site. The site does include overflow lines to the 1908-N Outfall Structure, but does not include the 1908-N Outfall Structure itself.

Waste Type: Process Effluent

Waste Description:

The waste is the contaminated underground pipelines. The following radionuclides were released from the reactor through the underground pipelines to the 116-N-4 (1300-N), 1304-N Emergency Dump Basin and Tank, the 107-N Filter Building and to the 1908-N Outfall Structure. Residual contaminants of some may be expected to remain in the underground pipelines. These include: sodium-24, niobium-95, iodine-131, chromium-51, zirconium-95, tellurium-132, technetium-99, manganese-54, iron-59, ruthenium-103, cerium-144, and cobalt-60. Because of radioactive decay, only manganese-54, cobalt-60, and cerium-144 are expected to remain.

Site Code: 100-N-65 Classification: Accepted

Site Names: 100-N-65, UPR-100-N-17 Interceptor **ReClassification:**

Trench, Diesel Oil Interceptor Trench

Site Type: Trench Start Date: 1966

Site Status: Inactive End Date:

Site The site is a trench that was excavated along the Columbia River bank to intercept diesel oil **Description:** before it could reach the river. In 1994, the trench was backfilled with material to the top of the

adjacent berm. The trench was excavated as a result of an unplanned release of 303,000 liters (80,000 gallons) of diesel fuel that leaked from a pipeline within 166-N Tank Farm (See UPR-100-N-17). Several smaller unplanned releases also contributed to the need for the trench (See UPR-100-N-19 and UPR-100-N-20). Oil trapped in the trench was ignited and burned. A

significant portion of the oil was thus removed before it could reach the river.

Waste Type: Oil

Waste **Description:** The waste was diesel oil from spills in the 100-N Area diesel oil storage facilities.

Site Code: 100-N-66 **Classification:** Accepted

100-N-66, 105-N/109-N Reactor Building **ReClassification: Site Names:**

Complex

Site Type: Reactor **Start Date:** 1963 **Site Status:** Inactive End Date: 1987

Description:

The site is the 105-N Reactor Building and the 109-N Heat Exchange Building. The 105-N Building is a reinforced concrete and structural steel building with channeled steel siding. The reactor is contained within a reinforced concrete enclosure which serves as a confinement zone capable of withstanding moderate overpressures. This enclosure also contains the control rod systems, inlet and outlet pipe galleries, exhaust fans, elevators for servicing the front and rear faces, a gallery beneath the reactor for various monitoring purposes, and receiving basin for spent fuel elements. Surrounding the reactor enclosure on three sides are rooms housing auxiliary facilities and supporting services. These include offices, common facilities, the main control room, electrical control rooms, shop area, ventilation supply rooms, gas dryer and cooler rooms, instrumentation rooms, metal preparation and storage facilities, spent fuel storage, examination facility, and transfer area. On the fourth side of the confinement enclosure, to the rear of the reactor, is the 109-N Heat Exchange Building which shares a common wall with the 105-N Building. As in the other reactor buildings a zoned ventilation system is provided so that air flow is maintained in the direction of areas having the greatest potential risk of contamination. The control room has its own refrigerated air conditioning system. The 105-N Reactor Building is 137.77 meters (452 feet) by 78.94 meters (259 feet) with a stepped roof to 21.34 meters (70 feet). Additionally, a 55.78 meters (183 feet) by 21.34 meters (70 feet) basin and transfer area extend west at the southwest corner. The breakdown of the facility is 29 offices: 467.29 square meters (5.030 square feet); 4 shops: 1.009.82 square meters (10.870 square feet); storage: 295.42 square meters (3,180 square feet); common: 467.29 square meters (5,030 square feet); process, operating and fuel storage: 13,006 square meters (1.4E+05 square feet).

The 109-N Building is a reinforced concrete, structural steel building with channeled steel siding. It is immediately adjacent to and shares a common wall (south wall of 109-N) with the 105-N Building. The 109-N Building contains a large pipe gallery on the north side which receives the primary reactor coolant system piping from the reactor for distribution into five separate cells each housing two large heat exchangers, a primary circulating pump and associated piping. A sixth cell contains a heat exchanger system for the moderator cooling system. The pipe gallery and steam generator cells are located in a reinforced concrete enclosure which, as in the case of the reactor, defines a confinement zone. Located outside of the confinement zone are the pump drive systems, dump condensers for disposal of export steam, condensate return pumps, other auxiliary equipment, a small chemical laboratory, and water sampling and monitoring facilities. A Service Bay has facilities for decontaminating the primary coolant system and contains the heating and ventilation equipment, shop areas, office and common space. The 109-N Building is 62.79 meters (206 feet) by 116.74 meters (383 feet) by 11.89 meters (39 feet) high. The breakdown of the facility is 3 offices: 75.25 square meters (810 square feet); 2 shops: 197.88 square meters (2,130 square feet); common: 111.48 square meters (1,200 square feet); processing area: 11,148 square meters (1.23E+05 square feet).

Waste Type: Equipment

The waste is the 105-N/109-N Building complex, including the reactor core. The 105-N and Waste **Description:** 109-N Building complex is radioactively contaminated or potentially contaminated within all

confinement zones, irradiated fuel storage areas, primary and secondary coolant piping systems,

and confinement ventilation systems.

Site Code: 100-N-67 Classification: Accepted

Site Names: 100-N-67, HGP Dumping Area ReClassification: No Action (9/11/2000)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a pile of metal banding material, barbed wire, wire rope, concrete, and pipe. Some of

Description: the materials are partially buried.

Waste Type: Construction Debris

Waste The site contains metal banding material, barbed wire, pipe, and concrete.

Description:

Site Code: 100-N-68 Classification: Accepted

Site Names: 100-N-68, N Basin Low Level Radioactive **ReClassification:**

Water Spill

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site has been posted with contaminated area signs and the contamination has been temporarily

Description: stabilized with a fixative, tarps and plywood.

Waste Type: Water

Waste Using current analytical data on the N Basin water, the total curies released in the spill/leak for **Description:** all of the radionuclides was calculated to be 0.42 curies. No reportable quantities were exceeded.

Site Code: 100-N-69 Classification: Rejected (9/11/2000)

Site Names: 100-N-69, 105-NB Stormwater Injection **ReClassification:**

Well, Miscellaneous Stream #801

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is covered with a 0.56 meter (1.8 foot) diameter steel grate and is 2.56 meters (8.4 feet)

Description: deep. The drywell is constructed of concrete. The site appears to drain stormwater that

accumulates at a low point and from roof drains on the 105-NB building. Flow rates to the drain are estimated to be less than 19 liters (5 gallons) per minute. No contaminated areas were

observed at the time of the inspection.

Waste Type: Stormwater Runoff

Waste This site receives less than 19 liters (5 gallons) per minute of stormwater only.

Description:

Site Code: 100-N-70 Classification: Rejected (9/11/2000)

•

Site Names: 100-N-70, 1705-N Stormwater Injection ReClassification: Well, Miscellaneous Stream #802

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The site is covered with a 1 meter (3.3 foot) diameter steel grate at grade level and is constructed

Description: of concrete. The site is filled with gravel and is located in a depression. The site appears to be a

drain for stormwater that collects in a depression from the surrounding area and the roof of 1705-N. The flow rates to the site is estimated to be less than 19 liters (5 gallons) per minute. No

contaminated areas were observed at the time of the inspection.

Waste Type: Stormwater Runoff

Waste This site received less than 19 liters (5 gallons) per minute of stormwater runoff only.

Description:

Site Code: 100-N-71 Classification: Rejected (5/31/2001)

Site Names: 100-N-71, 100-N Sewer System, Project ReClassification:

4546.010

Site Type:Septic TankStart Date:Site Status:UnknownEnd Date:

Site This site was added to WIDS before the septic system was built; subsequently the project has

Description: been cancelled because of lack of funds (per Nolan Draper).

Site Code: 100-N-72 Classification: Rejected (9/11/2000)

Site Names: 100-N-72, 107-N Building East Area **ReClassification:**

Stormwater Runoff, Miscellaneous Stream

#396

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site

The site is a concrete french drain, about 0.5 meters (1.5 feet) in diameter, with an open metal

grate cover. The bottom is about 0.3 meters (1 foot) deep, and only sand and cobbles are visible. A concrete trench, about 18 meters (60 feet) long, drains the paved and graveled area north of the 107-N Building and empties into this french drain. The trench prevents stormwater from flowing

to the west, and down a steep slope in the area fenced for security exclusion.

The area is posted with underground radioactive materials (URM) signs, like most of the 100-N

Area. This french drain receives stormwater only, however.

Waste Type: Stormwater Runoff

Waste

Description:

Description:

Site Code: 100-N-73 Classification: Rejected (9/11/2000)

Site Names: 100-N-73, 107-N Building West Area **ReClassification:**

Stormwater Runoff, Miscellaneous Stream

#395

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The drain is a concrete structure with a steel lid, fed by a concrete trough running from north of

Description: the 107-N Building, along the base of the security fence.

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 100-N-74 Classification: Accepted

Site Names: 100-N-74, 183-N Building Fire System ReClassification: Rejected (9/11/2000)

Drain, Miscellaneous Stream #492

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is in a graveled lot on the north side of the 183-N Building. A fire system relief valve

Description: (site 100-N-75) extends about 1 meter (3 feet) above the ground, and is surrounded by six steel

barrier poles to protect it from vehicles. Two metal 10 centimeter (4 inch) pipes with handles for

turning valves are next to the relief valve, but no pit is visible.

Waste Type: Water

Waste

Description:

Site Code: 100-N-75 Classification: Accepted

Site Names: 100-N-75, 183-N Building Fire System ReClassification: Rejected (9/11/2000)

Relief Valve, Miscellaneous Stream #493

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site The relief valve is visible in a large graveled area north of the 183-N Building. It is surrounded

Description: by 6 metal posts that protect it from vehicles. The relief valve is just under 1 meter (3 feet) high,

and painted red. The entire area is marked "Underground Radioactive Materials."

Waste Type: Water

Waste

Description:

Site Code: 100-N-76 Classification: Accepted

Site Names: 100-N-76, 181-N Pumphouse French Drains **ReClassification:**

Site Type: French Drain Start Date:

Site Status: Active End Date: 2001

Site The site is two french drains; the drains were plugged with grout on June 13, 2001. The french drains were connected to each other underground, and provided steam condensate and stormwater

drainage just east of the 181-N Pumphouse. These drains are believed to have been built to receive steam condensate blowdown. However, when the steam line was removed the drains were

left behind, and drained excess stormwater.

Both drains are about 46 centimeters (18 inches) in diameter and constructed of concrete. A 10 centimeter (4 inch) pipe connects them; this pipe is about 20 centimeters below the lip in the southern drain and about 1 meter (3 feet) below the lip of the northern drain. Because the northern drain is noticeable higher than the southern drain, it is difficult to tell if the pipe is level or drains preferentially toward either side. The drains are about 16 meters (52 feet) apart.

Steam Condensate Waste Type:

Waste **Description:**

Site Code: 100-N-77 **Classification:** Accepted

100-N-77, 100N River Effluent Pipeline, **Site Names: ReClassification:**

1908-N Outfall, 100-N-77:1 Flume

Site Type: Radioactive Process Sewer **Start Date: Site Status:** Inactive **End Date:**

Site The site consists of the 260-centimeter (102 inch) river effluent pipeline (riverline) that extends **Description:** from the 1908-N Outfall (1908-N) in the 100N area into the main channel of the Columbia River

approximately 120 meters (400 feet). The line is an NPDES discharge point (Outfall number

See subsite 100-N-77:1 for information on the flume that was used to discharge effluent water when the river pipeline was blocked, damaged or undergoing maintenance.

SubSites:

SubSite Code: 100-N-77:1

SubSite Name: 100-N-77:1, 1908-N Flume

Classification: Accepted

ReClassification:

Site

Description:

The flume was used when the river lines were blocked, damaged, or undergoing maintenance, **Description:**

or when the flow rate exceeded the capacity of the lines.

Site Code: 116-N-1 Classification: Accepted

Site Names: 116-N-1, 1301-N Liquid Waste Disposal **ReClassification:**

Facility, 1301-N Crib and Trench

Start Date: 1963 **Site Type:** Crib Inactive End Date:

Site Status: 1985

> trench was added to enhance percolation capacity. Both facilities operated in tandem after 1965. The crib is an open, rectangular excavation, 88.5 by 38.1 by 1.52 meters (290 by 125 by 5 feet deep). A sloped soil and gravel embankment forms the walls of the crib. The bottom was filled with a 0.9-meter (3-foot) thick layer of large boulders. In 1981, an additional stabilizing layer of

The waste site includes a large crib and trench. The crib operated until 1965 when the "zig-zag"

large rock was added to the area around the weir box at the south end of the crib.

In 1965 a trench, measuring 15.3 x 488 x 3.7 meter (50 by 1,600 by 12 feet) was added that runs northeast in a zig-zag pattern from the north side of the crib. Wooden poles were laid across the

trench to support wire screens to keep birds out of the trench. In 1982 the bird screens were covered with a precast concrete panel cover to minimize wildlife intrusion and airborne contamination. The dimensions of the concrete cover is 15.9 X 424 X 0.20 meters (52 by 1390 by 0.67 feet thick). The panels were placed over the existing wooden beams and the bird screens. The edges of the trench cover were backfilled and shotcreted. Spaces between cover panels were grouted. The site is enclosed within a chain link fence and posted with "No Trespassing", "Danger - Unauthorized Personnel Keep Out", "Radiologically Controlled Area", "Underground Radioactive Material" and "Surface Contamination" signs.

Waste Type: Process Effluent

Waste Description:

The unit received radioactive water containing activation and fission products and small quantities of corrosive liquids and laboratory chemicals at an average flow rate of approximately 5,680 liters per minute (1,500 gallons per minute) (note: the 8 million liters assumes the crib effluent was steady 24 hours per day). The crib received radioactive effluent streams from the 105-N and 109-N Buildings. After 1965, the trench received the same wastes as the crib. Operational contaminant inventory records from 1964 through 1985 show a total of 3,000 curies of tritium, 2,300 curies of cobalt-60, 1,900 curies of strontium-90, 2,600 curies of cesium-137, and 23 curies of plutonium-239 being released to the crib and trench. An estimate of dangerous wastes from the decontamination of the primary coolant system discharged annually include 2,800 kilogram (6,100 pounds) of hydrazine test solution, 2,800 kilograms (6,100 pound) of ammonia test solution, 3,500 kilograms (7,800 pounds) of chloride test solution and 1,800 kilograms (3,900 pounds) of fluoride test solution per year of operation. No actual amounts are available. The estimates include common floor drains that discharged to the crib.

Site Code: 116-N-2 Classification: Accepted

Site Names: 116-N-2, 1310-N Chemical Waste Storage **ReClassification:**

Tank, The Golf Ball, 1310-N Waste

Storage Area

Site Type:Storage TankStart Date:1964Site Status:InactiveEnd Date:1987

Site Description:

The 116-N-2 Facility complex consists of piping, pumps, a transfer tank (commonly referred to as the silo) and a large, spherical storage tank (commonly referred to as the golf ball). The site was used as a collection tank for N Reactor primary piping decontamination wastes. The 3.4E+06-liter (9.0E+05-gallon) spherical tank is partially buried in the ground. A compacted soil radiation barrier, 7.6 meters (25 feet) high, surrounds the tank on three sides.

Waste Type: Process Effluent

Waste

Description:

Phosphoric acid used in the internal decontamination of the primary loop of the reactor, and successive rinse water were temporarily stored in this tank before being shipped to the 200 Area storage tanks. The liquid in the tank was neutralized with sodium hydroxide. Three unplanned releases of decontamination solution occurred at this site which cumulatively totaled 3.43E+05 liters (90,600 gallons).

Site Code: 116-N-3 Classification: Accepted

Site Names: 116-N-3, 1325-N Liquid Waste Disposal ReClassification: Interim Closed Out (12/23/2002)

Facility, 1325-N Crib and Trench

Site Type: Crib Start Date: 1983

Site Status: Inactive End Date: 1991

Site The site has been remediated and closed out.

Description:

Waste Type: Process Effluent

Waste This unit received radioactive activation and fission products and small quantities (below

Description: regulatory limits) of corrosive liquids and laboratory chemicals. Dangerous waste code numbers

include: F003, D002, D006, D007, D008, D009, U133, WC02, and WT02.

Site Code: 116-N-4 Classification: Accepted

Site Names: 116-N-4, 1300-N Emergency Dump Basin **ReClassification:**

Site Type:Retention BasinStart Date:1963Site Status:InactiveEnd Date:1973

Site Description:

The 116-N-4 Emergency Dump Basin is a rectangular shaped, outdoor, concrete storage basin with a 10.7-centimeter (0.188-inch) carbon steel liner. It measures 39.7 by 24.4 meters (130 by 80 feet). Oriented north to south along its long axis, it lies immediately west of the 105-N Reactor Building. The 3.785E+06-liter (1.0E+06-gallon) design capacity basin contains approximately 9.99E+05 liters (2.64E+05 gallons) of water and 64.4 cubic meters (2,300 cubic feet) of sediment. Vegetation consisting mostly of reeds, grows in the basin corners. The basin is protected by a nylon mesh cover to minimize wildlife intrusion. A 81.3-centimeter (32-inch) sparger pipe and an 20.3-centimeter (8-inch) pump casing extend along the bottom. Water was maintained in the basin to prevent the spread of contaminants, but this practice has since been discontinued. Water remains in the basin to a depth of 3.1 to 3.7 meters (10 to 12 feet). Average sediment thickness in the basin is 0.8 meters (2.5 feet).

Waste Type: Sludge

Waste Description:

Site Code:

Sediments were sampled in 1995 and found to contain radionuclides exceeding WHC Category I limits and heavy metal concentrations below Resource Conservation and Recovery Act (RCRA) limits. The site is, therefore, radiologically contaminated but is not a mixed waste site. Radionuclide and heavy metal characterization is provided in BHI-00731. Since basin leakage has occurred, additional contaminants may be expected in the soils beneath the basin. Contaminants in the Dump Basin liquid include average concentrations of 6.25 E+05 of H-3, 6.12 E+01 of C0-60, 5.70 E+04 of Sr-90, 2.51 E+01 of Zr-95, <5.16 E+01 of Ru-106, 2.16 E+01 of Sb-125, <5.16 E+00 of Cs-134, 9.27 E+02 of Cs-137, 1.62 E-02 of Pu-239 and 1.82 E-01 of Pu 239/240.

116-N-8 Classification: Accepted

Site Names: 116-N-8, 163-N Mixed Waste and ReClassification: Rejected (9/6/2000)

Hazardous Waste Container Storage Pad,

1330-N, 116-N-8 Storage Pad

Site Type: Storage Pad (<90 day) Start Date: 1986

Site Status: Active End Date:

Site Containers are stored on a curbed and fenced concrete pad. The pad is covered by an open metal

Description: shed, divided into three storage areas each with its own locked gate. The entire unit is approximately 45 by 18 meters (150 by 60 feet). A small cabinet in front holds personal protective equipment and spill response materials. The front of the unit is an asphalt

Hanford Site Waste Management Units Report January 2004

parking/driving area; the sides and back are gravel.

Waste Type: Soil

Waste This site receives radioactively contaminated oil and miscellaneous hazardous process chemicals

Description: in drums and containers. The amounts received are variable based on operations.

Site Code: 118-N-1 Classification: Accepted

Site Names: 118-N-1, 100-N Area Silos, 100-N Area ReClassification:

Spacer Silos, 118-N, 1303-N Spacer Silos, 1303-N Radioactive Dummy Burial Facility

Site Type:SiloStart Date:1963Site Status:InactiveEnd Date:1995

Site The site was a temporary storage facility for contaminated fuel spacers. The silos are partially underground with a approximately 1.5 meter (5 foot) of the structures above ground covered with

soil. The soil mound had scant vegetation growing on it and a single vent stack protruded from

the mound. A chain link fence surrounded the site on three sides and was posted with "Contamination Area, Underground Radioactivity and Soil Contamination Area" signs. The western side is barricaded with a 2.1-meter (7-foot) concrete wall. Following surface stabilization in 1998, the site was posted with Underground Radioactive Material signs.

Waste Type: Equipment

Waste This site received byproduct radioactive metallic fuel spacers from the reactor. Quantities were variable based upon reactor operation levels. The radioactively contaminated fuel spacers were

temporarily stored in the underground silos and then shipped to the 200 Area Low-Level Burial

Grounds for disposal. All spacers were removed from the silos in September 1995.

Site Code: 120-N-1 Classification: Accepted

Site Names: 120-N-1, 1324-NA Percolation Pond ReClassification:

Site Type:PondStart Date:1977Site Status:InactiveEnd Date:1991

Site The site has been remediated.

Description:

Waste Type: Process Effluent

Waste Until 1983, the percolation pond received corrosive wastes from the regeneration of the **Description:** demineralizer column in the 163-N Demineralizer Plant and filter backwash water. It al

demineralizer column in the 163-N Demineralizer Plant and filter backwash water. It also received nonregulated neutralized waste from the 1324-N Surface Impoundment and non-regulated process and cooling water from the 163-N Plant. Discharge of dangerous wastes was discontinued in April 1986. After November 1988, the percolation pond received neutralized waste water with a pH range between 4 and 11. The percolation pond no longer receives wastes. Sampling and analysis data of surface soils and sediment are listed in DOE/RL-90-22.

Site Code: 120-N-2 Classification: Accepted

Site Names: 120-N-2, 1324-N Surface Impoundment **ReClassification:**

Site Type:Surface ImpoundmentStart Date:1986Site Status:InactiveEnd Date:1988

Site The site has been remediated.

Description:

Waste Type: Process Effluent

Waste The 1324-N Surface Impoundment received corrosive regeneration effluent and process and cooling water from the 163-N Demineralization Plant. Analytical results from surface soils and

sediment test pit sampling are reported in DOE/RL-90-22.

Site Code: 120-N-3 Classification: Accepted

Site Names: 120-N-3, 163-N Neutralization Pit and **ReClassification:**

French Drain

Site Type:French DrainStart Date:1963Site Status:InactiveEnd Date:1988

Site The 163-N Neutralization Pit measures 10.2 meters (33.3 feet) by 2.8 meters (9 feet) and is 2.4 meters (8 feet) deep. It is covered with plywood covers. A portion of the 163-N Neutralization

Pit is covered with a concrete slab and metal shed.

Waste Type: Chemicals

Waste The unit received unknown amounts of corrosive liquids, such as sodium hydroxide and sulfuric

Description: acid.

Site Code: 120-N-4 Classification: Accepted

Site Names: 120-N-4, 1310-N Hazardous Waste Storage **ReClassification:**

Area, 1310-N Waste Oil Storage Pad, 1310-

N Non-Hazardous Waste Pad

Site Type:Storage Pad (<90 day)</th>Start Date:1985Site Status:InactiveEnd Date:1989

Site The 1310-N Hazardous Waste Storage Area was a concrete pad approximately 20 by 25 meters

Description: (70 by 80 feet), surrounded with a concrete berm (curb) and locked chain-link fence. Outside the

pad the ground surface is gravel. A small open shed is in the southwest corner of the pad. The site is posted as a Radioactive Materials Area, and is also posted "Contaminated Lead Storage Area (For Re-Use)." The area contain (April 12, 2000) several wrapped objects marked with

radioactive warning signs.

Site Code: 120-N-5 Classification: Accepted

Site Names: 120-N-5, 108-N/163-N Transfer Line And ReClassification: Rejected (9/11/2000)

Neutralization Pit

Site Type:Product PipingStart Date:1963Site Status:InactiveEnd Date:1990

Site Description:

The Transfer Line and Neutralization Pit is a 220-meter (720-foot) long polymer lined concrete pipe trench (encasement) that contains two transfer lines that run between the 108-N and the 163-N Buildings. The trench has concrete bottom and sides and a metal plate cover. The enclosed lines are one 6.4-centimeter (2.5-inch) sodium hydroxide line and one 10.2-centimeter (4-inch) sulfuric acid line. The trench runs 50 meters (154 feet) south from the 163-N Building to a neutralization pit, east for 132 meters (433 feet), and then north for 26 meters (85 feet) to the 108-N Building. The 1.22-meter (4-foot) by 3.05-meter (10-foot) concrete neutralization pit, located at coordinates N149307 and E571120, is designed to receive waste spills from within the encasement. Its upper surface is a few inches above grade. The neutralization pit has two 61-centimeter (24-inch) steel manhole covers, one marked "acid" and the other "caustic", that provide pit access. DOE/RL-90-22 describes its internal dimensions as two vaults, each measuring 1.8 by 1.8 by 3.1 meters (6 by 6 by 10 feet) deep.

Waste Type: Chemicals

Waste Description:

The unit transferred sodium hydroxide and sulfuric acid reagents from a chemical unloading facility to the point-of-use at the 163-N Demineralization Plant via transfer pipes contained in a concrete trench. Several leaks to the soil resulted from corrosion of the transfer pipes and concrete trench by the concentrated solutions.

Site Code: 120-N-6 Classification: Accepted

Site Names: 120-N-6, 108-N Acid Tank Vent French ReClassification: Rejected (9/11/2000)

Drains

Site Type:French DrainStart Date:1963Site Status:InactiveEnd Date:1988

Site This site consisted of five french drains which were removed in 1988. No evidence of the former french drains remains. The area is surrounded by posts, chain, and a sign stating "Controlled"

Area - Authorized Personnel Only" and "108-N/ WIDS Site 120-N-6".

Waste Type: Chemicals

Waste The drains received unknown quantities of sulfuric acid overflows from the acid storage tanks and transfer lines in intermittent discharges. Each discharge is estimated to have averaged less

than 3.8 liters (1 gallon) of liquid.

Site Code: 120-N-7 Classification: Accepted

Site Names: 120-N-7, 108-N Acid Unloading Facility **ReClassification:**

French Drain

Site Type:French DrainStart Date:1963Site Status:InactiveEnd Date:1987

Site The site appears as a vertical broken vitrified clay pipe extending well above grade on a discolored soil mound. Limestone is still visible inside the broken pipe. The lead pipe that

delivered acid drips from the boom hose funnel to the french drain is visible at grade level just

north of the french drain.

Waste Type: Chemical Release

Waste Description:

The unit received unknown amounts of sulfuric acid in intermittent discharges. Each discharge is estimated to have averaged less than 3.8 liters (1 gallon) of liquid. The concentrated acid may

have etched lead from the funnel and pipe as it discharged to the french drain.

Site Code: 120-N-8

Classification: Accepted

Site Names:

120-N-8, 163-N Sulfuric Acid Tank Vent

ReClassification: Rejected (9/11/2000)

French Drain

Site Type: French Drain

Start Date: 1963

Site Status: Inactive End Date: 1988

Site T

The french drain was removed in 1988 and the site has been covered with gravel. There is

Description: currently no evidence of the former french drain at the site.

Waste Type: Chemicals

Waste Description:

The unit received unknown amounts of sulfuric acid in intermittent discharges. Each discharge

is estimated to have averaged less than 3.8 liters (1 gallon) of corrosive liquid.

Site Code: 124-N-1

Classification: Accepted

Site Names:

124-N-1, 124-N-1 Septic Tank, 100-N

ReClassification:

Sanitary Sewer System No. 1

Site Type: Septic Tank

Start Date: 1963

Site Status: Active

End Date:

Site

Description:

The upper surface of the 124-N-1 Septic Tank is visible and measures 1.5 by 1 meters (58 by 40 inches) and stands 36 centimeters (14 inches) above grade. The circular seepage pit has 18.4 square meters (200 square feet) of infiltration area and 8,700 liters (2,300 gallons) of capacity.

square meters (200 square feet) of infiltration area and 8,700 liters (2,300 gallons) of capacity. Sanitary wastes entered the septic tank through a 10-centimeter (4-inch) vitrified clay pipe

connecting the septic tank to the cesspool.

Waste Type: Sanitary Sewage

Waste

This unit receives approximately 5,300 liters per day (1,400 gallons per day) of sanitary sewage.

Description:

Site Code:

124-N-2 Classification: Accepted

Site Names: 124-N-2, 124-N-2 Septic Tank, 100-N

Sanitary Sewer System No. 2

ReClassification:

Site Type: Septic Tank

Start Date: 1963

Site Status: Inactive

End Date: 1987

Site

The unit includes a septic tank and seepage pit. The seepage pit provided approximately 18.4

Description: square meters (200 square feet) of infiltration surface area and 8,700 liters (2,300 gallons) of fluid

storage.

Waste Type:

Sanitary Sewage

Waste During the period of operation, this unit received an estimated 757 liters/day (200 gallons/day)

Description: of sanitary sewage from the 182-N Building.

Site Code: 124-N-3 Classification: Accepted

Site Names: 124-N-3, 124-N-3 Septic Tank, 100-N ReClassification:

Sanitary Sewer System No. 3

Site Type: Septic Tank Start Date: 1982

Site Status: Inactive End Date:

Site A field visit in 1999 did not find any visual evidence of this site.

Description:

Waste Type: Sanitary Sewage

Waste When operational, this unit received approximately 170 liters/day (45 gallons/day) of sanitary

Description: sewage.

Site Code: 124-N-4 Classification: Accepted

Site Names: 124-N-4, 100-N Sanitary Sewer System No. **ReClassification:**

4, 124-N-4 Septic Tank

Site Type:Septic TankStart Date:1963Site Status:InactiveEnd Date:1987

Site The site is located inside an area that is posted as Contamination Area/Radiation Area.

Description:

Waste Type: Sanitary Sewage

Waste The unit received approximately 136,400 liters/day (30,000 gallons/day) of sanitary sewage.

Description:

Site Code: 124-N-5 Classification: Accepted

Site Names: 124-N-5, 100-N Sanitary Sewer System No. ReClassification: Rejected (9/11/2000)

5, 124-N-5 Septic Tank

Site Type:Septic TankStart Date:1981Site Status:InactiveEnd Date:1987

Site The site is in the middle of a large graveled lot, free of vegetation. When the tank was **Description:** deactivated, it was covered with a layer of parking lot gravel and is no longer visible.

Waste Type: Sanitary Sewage

Waste This unit received approximately 14,000 liters/day (3,800 gallons/day) of sanitary sewage.

Description:

Site Code: 124-N-6 Classification: Accepted

Site Names: 124-N-6, 100-N Sanitary Sewer System No. ReClassification: Rejected (9/11/2000)

6, 124-N-6 Septic Tank

Site Type: Septic Tank Start Date: 1979

Site Status: Inactive End Date: 1987

Site A site visit in July 1999 was unable to visually locate this site. The site was covered with parking

Description: lot gravel and the exact location cannot be visually identified.

Waste Type: Sanitary Sewage

Waste This unit received an unknown amount of sanitary sewage.

Description:

Site Code: 124-N-7 Classification: Accepted

Site Names: 124-N-7, 100-N Sanitary Sewer System No. ReClassification: Rejected (9/11/2000)

7, 124-N-7 Septic Tank

Site Type:Septic TankStart Date:1984Site Status:InactiveEnd Date:1987

Site A site visit in July 1999 found a 0.61 meter (2 foot) diameter manhole and two 19.6 centimeter (8

Description: inch) diameter access ports labeled "Sewer". No drain field was identified. However, the 100-N Facility Manager said (see Deford 1996 reference below) that when the tank was pumped and

filled with sand, it was covered with a layer of parking lot gravel and can no longer be located.

Waste Type: Sanitary Sewage

Waste This unit received approximately 19,700 liters/day (5,200 gallons/day) of sanitary sewage from

Description: office trailers.

Site Code: 124-N-8 Classification: Accepted

Site Names: 124-N-8, 100-N Sanitary Sewer System No. ReClassification: Rejected (9/11/2000)

8, 124-N-8 Septic Tank

Site Type:Septic TankStart Date:1983Site Status:InactiveEnd Date:1987

Site A site visit in July 1999 found two concrete pads (0.6 meters by 0.6 meters [2 X 2 feet]) with 19.6 **Description:** centimeter (8 inch) lids marked "Sewer" in the general location of this site. It is not known if one

of the markers is from the old system (124-N-8) or the replacement sewage system (124-N-10).

Waste Type: Sanitary Sewage

Waste This unit received approximately 3,400 liters/day (900 gallons/day) of sanitary sewage from

Description: office trailers. .

Site Code: 124-N-9 Classification: Accepted

Site Names: 124-N-9, 124-N-9 Septic Tank, 100-N ReClassification:

Sanitary Sewer System No. 9

Site Type: Septic Tank Start Date: 1985

Site Status: Active End Date:

Site The site is located inside an area that is delineated by light posts and chain.

Description:

Waste Type: Sanitary Sewage

Waste This unit receives approximately 8,300 liters/day (2,200 gallons/day) of sanitary sewage.

Description:

Site Code: 124-N-10 Classification: Accepted

Site Names: 124-N-10, 124-N-10 Sanitary Sewer ReClassification:

System, 100-N Central Sewer System No. 10, Project H-677, 100-N Sewage Lagoon

Site Type: Sewage Lagoon Start Date: 1987

Site Status: Active End Date:

Site Three sewer ponds (or lagoons) (identified in the drawings as the aeration pond, stabilization pond, and infiltration pond) with a total length of 822.75 ft by 220 ft wide with the long axis on a

heading of 045 degrees true. The coordinates provided are taken from the drawing and represent the approximate centroid of the aeration pond. The site, which serves a minimum of 27 facilities or buildings, consists of a three pond sewage lagoon facility, a server trunk line and other pipelines, two lift stations, new manholes, and associated sewer system instrumentation and

annunciation capability.

Waste Type: Sanitary Sewage

Waste The maximum design flow for this septic system is 50,000 gallons per day. It is designed for a **Description:** maximum of 2,500 employees. The site has received domestic wastewater sewage from the 100-

N Area and domestic sewage pumped from septic tanks throughout the Hanford Site.

Incidental solids (rags, scum, and other debris) are removed from the system and disposed of as solid waste at an approved disposal site. The discharge from the infiltration pond percolates

down to the groundwater.

Site Code: 128-N-1 Classification: Accepted

Site Names: 128-N-1, 100-N Burning Pit, 128-N-1 ReClassification:

Burning Pit

Site Type:Burn PitStart Date:1963Site Status:InactiveEnd Date:1989

Site The site shows evidence of burning, in the form of burnt trash and cans. Most of the site has been

Description: backfilled.

Waste Type: Misc. Trash and Debris

Waste Combustible materials, such as nuisance vegetation and combustible wastes (office waste, tools **Description:** and hardware, and potentially paints and solvents), have been burned at this site. The quantity of

material burned at the site is unknown. Since the establishment of the Hanford Central Landfill

(in the early 1970's), this unit has been used for burning nuisance vegetation only.

Site Code: 130-N-1 Classification: Accepted

Site Names: 130-N-1, 183-N Backwash Discharge **ReClassification:**

Pond, 126-N-1, 183-N Filter Backwash

Pond,

Site Type: Pond Start Date: 1983

Site Status: Active End Date:

Site The site consists of a natural marsh-like pond which receives filter backwash from the 183-N

Description: Water Filter Plant.

Waste Type: Water

Waste The unit receives filter backwash containing polyacrylamide and aluminum sulfate.

Description:

Site Code: 1908-N Classification: Accepted

Site Names: 1908-N Outfall, 163-N Regeneration ReClassification:

Wastewater Spill

Site Type: Outfall Start Date: 1963

Site Status: Active End Date:

Site The site is an outfall structure (seal well) that was used as a sump for several discharge lines and

Description: to drop the liquid discharge level for overflow to the river. The outfall also discharged to a flume

which was used as an alternative to the river pipelines. An unknown level of radioactive contamination exists within the structure because the discharge lines were associated with the

reactor secondary steam system.

Waste Type: Water

Waste The 1908-N Sealwell received raw river water used to cool the secondary cooling water for the

Description: N Reactor. The reported date was April 18, 1986.

Site Code: 1908-NE Classification: Accepted

Site Names: 1908-NE, HGP Outfall, 1908-NE Building **ReClassification:**

Site Type:OutfallStart Date:1966Site Status:InactiveEnd Date:1988

Site The unit consists of a concrete seal well and river pipeline.

Description:

Waste Type: Water

Waste The unit was designed to provide controlled waste water releases from the Hanford Generating **Description:** Plant (HGP) facility. The unit was permitted under the National Pollutant Discharge Elimination

System (NPDES). Releases to the outfall include coolant water, any releases from the HGP

building sump prior to the late 1960s, and discharges from the HGP Settling Pond.

Site Code: 600-32 Classification: Accepted

Site Names: 600-32, N Area Landfill ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

A field walkdown done in August 2000 compared the site to the area mapped in Arcview and found it to be a duplicate of 100-N-39 and 100-N-19 (it is contained within the much larger 100-N-19).

The site is a large area covering approximately 13 hectares (32 acres), consisting of an abandoned gravel pit and several other depressions which were used as dumping areas for 100-N Reactor and the Hanford Generating Plant (HGP). The main gravel pit depression is approximately 6 meters (20 feet) deep and is located southwest of the HGP facility fence. A steel casing, described as a well head, is located near the northern edge of the unit. Large concrete blocks, a burning area, broken glass, a sandblast material pile, and other debris is scattered across the bottom of the site.

Waste Type: Misc. Trash and Debris

Waste Description:

Unit waste includes 19-liter (5-gallon) paint cans (one labeled SCC Portland 26 5 65, one labeled USS 5-28/26-65, one labeled ICC=37-76-80 NRC, others are crushed), sheet aluminum, steel pipes, rebar, transite, cans wood, two 208-liter (55-gallon) drums (one labeled Delvac 1330 SAE-30 motor oil), concrete, wire, cable and spools, bottles (soda pop and amber 3.8-liter [1-gallon] jugs), broken fluorescent and incandescent light blubs, tires, grass clippings and miscellaneous construction debris.

Site Code: 600-35 Classification: Accepted

Site Names: 600-35 ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

This relatively flat site appears to be a former rock crushing/screening operation and borrow pit (on the northern edge). The ground is covered with fine gravel chips with little or no vegetation. A well-head (number 87-55) and the 100-N export water line were noted on the southern edge and along the east-west line of the site, respectively.

Waste Type: Misc. Trash and Debris

Waste Description:

Miscellaneous surface debris was the only waste identified at this site. This debris includes a ladder, an 20-centimeter (8-inch) diameter steel pipe, metal scrap wire rope, miscellaneous wood debris, pieces of aluminum, and a container lid (no markings). A deteriorated 12 volt lead-acid battery of the type used in heavy equipment. A 208-liter (55-gallon) drum (no marking) was observed approximately 76 meters (250 feet) west of the site.

Site Code: UPR-100-N-1 Classification: Accepted

Site Names: UPR-100-N-1, 100-N 1304-N Dump Tank, ReClassification:

UN-100-N-1, Emergency Dump Tank Inlet

Valve Box Leak

Site Type:Unplanned ReleaseStart Date:1974Site Status:InactiveEnd Date:1974

Site The site is an unplanned release covering an area of ground estimated at 20,000 square feet (1,858)

Description: square meters).

Waste Type: Process Effluent

Waste The leak consisted of filtered water in the estimated amount of 113,550 liters (30,000 gallons)

Description: containing 0.2 Curies of radioactive constituents.

Site Code: UPR-100-N-2 Classification: Accepted

Site Names: UPR-100-N-2, 100-N FLV-858 Valve **ReClassification:**

Leak, UN-100-N-2

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The site is on area of ground estimated at 28 square meters (300 square feet).

Description:

Waste Type: Process Effluent

Waste The release consisted of primary coolant water containing less than 1 curie of beta/gamma.

Description:

Site Code: UPR-100-N-3 Classification: Accepted

Site Names: UPR-100-N-3, Dummy Fuel Transfer Line, ReClassification:

UN-100-N-3, Spacer Disposal System Transport Line Leak, UN-116-N-3

Site Type:Unplanned ReleaseStart Date:1978Site Status:InactiveEnd Date:1978

Site The site began as a 1.2-meter (4-foot) diameter and 0.8-meter (2.5-foot) deep sink hole.

Description: Currently, the spill site is within a radiation control zone.

Waste Type: Water

Waste The release consisted of storage basin water with an estimated radionuclide release of 0.07 **Description:** curies of cobalt-60, 0.8 curies of strontium-90, 0.25 curies of cesium-137, 0.14 curies of

cerium/praseodymium-144, 0.0004 curies of plutonium-239, and 1.0 curies of tritium (assumed).

Site Code: UPR-100-N-4 Classification: Accepted

Site Names: UPR-100-N-4, 1322-A Sump Overflow, ReClassification:

UN-100-N-4

Site Type:Unplanned ReleaseStart Date:1977Site Status:InactiveEnd Date:1977

Site The original site of contamination was the 1322-NA (Effluent Water Pilot Plant) floor and ground by the front and rear doors on outside the site also includes the drainage tank in Building 1322-N

(Waste Treatment Pilot Plant Facility).

Waste Type: Water

Waste The site received low-level radioactive water. The total activity was 0.5 millicuries.

Description:

Site Code: UPR-100-N-5 Classification: Accepted

Site Names: UPR-100-N-5, 1310-N Chemical Waste **ReClassification:**

Storage Tank Leak, UN-100-N-5, 116-N-2 Radioactive Chemical Waste Treatment

Storage Facility

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site The release occurred in the 1310-N Radioactive Chemical Waste Handling Facility on the

Description: recirculation pump discharge line.

Waste Type: Water

Waste The leak consisted of 340,650 liters (90,000 gallons) of radioactive wastewater containing decontaminated chemicals. The waste contained approximately 35 curies of activity, of which

26 curies were cobalt-60. The solution had a pH of approximately 9.

Site Code: UPR-100-N-6 Classification: Accepted

Site Names: UPR-100-N-6, 1 1/2 Inch Chemical ReClassification:

Decontam. Waste Drain Line Leaks, UN-100-N-6, UN-116-N-6, Chemical Decontamination Waste Drain Line Leak

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date:

Site A site visit in August 2000 found a roped area east of 1714-N. The area was posted Underground

Description: Radioactive Material and Controlled Area. A soil mound was inside the roped area.

Waste Type: Process Effluent

Waste The release consisted of approximately 6,813 liters (1,800 gallons) of radiologically

Description: contaminated water containing an estimated 0.2 curies cobalt-60, 0.04 curies manganese-54,

0.003 curies ruthenium-103, and 0.003 curies of cesium-137.

Site Code: UPR-100-N-7 Classification: Accepted

Site Names: UPR-100-N-7, Ten-inch Radioactive Drain ReClassification:

Return Line Leak, UN-116-N-7, UN-100-N-

7

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1985

Site A leak occurred in a buried 25.4-centimeter (10-inch) drain line between the 109-N Building and

Description: the 1909-N Valve Pit.

Waste Type: Process Effluent

Waste The release consisted of approximately 1,907,042 liters (504,053 gallons) of radiologically

Description: contaminated N-Reactor cooling water containing an estimated 1.0 curies sodium-24, 0.5 curies cobalt-60, 0.09 curies ruthenium-103, 0.4 curies chromium-51, 0.2 curies zirconium-95, 0.3

curies tellurium-132, 0.30 curies manganese-54, 0.1 curies niobium-95, 0.5 curies iodine-131, 1.2 curies iron-59, 0.2 curies cerium-141, 0.2 curies cerium-144, and 0.8 curies technecium-99.

Site Code: UPR-100-N-8 Classification: Accepted

Site Names: UPR-100-N-8, 1322-A Sump Overflow, ReClassification:

UN-100-N-8

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

The original site of contamination was the 1322-NA (Effluent Water Pilot Plant) including the **Description:** area surrounding the sump, floor, various pieces of equipment, and the ground just outside the

rear door (south door).

Waste Type: Water

Waste The release contained up to 379 liters (100 gallons) of radioactive water contaminated with mixed fission and activation products to a level of 1,000,000 picocuries/liter. The total activity

was 0.5 millicuries.

Site Code: UPR-100-N-9 Classification: Accepted

Site Names: UPR-100-N-9, 119-N Cooling Water Drain ReClassification:

Line Leak, UN-100-N-9

Site Type: Unplanned Release Start Date: 1974

Site Status: Inactive End Date:

Site The site is an excavation site (backhoe) greater than 1.2 meters (4 feet) below grade and includes

Description: a 5-centimeter (2-inch) valve on a drain line.

Waste Type: Water

Waste The release of 8,327 liters (2,200 gallons) of low-level radioactive contaminated water contained about 500,000 picocuries. The water was released from the 119-N cooling water drain line.

Site Code: UPR-100-N-10 Classification: Accepted

Site Names: UPR-100-N-10, 100-N Area 105-N Check ReClassification:

Valve, UN-100-N-10, Lift Station Gravity

Drain Line Leak

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site The leak occurred in an area previously marked as a radiation zone.

Description:

Waste Type: Water

Waste The release contained 0.001 curies of mixed fission and activation products.

Description:

Site Code: UPR-100-N-11 Classification: Accepted

Site Names: UPR-100-N-11, Five Hundred Pound

Valve Bonnet Contamination in Uncontrolled Area, 100-N Area Valve

Bonnet, UN-100-N-11

Site Type: Unplanned Release Start Date: 1975
Site Status: Inactive End Date: 1975

Site

The contaminated site consisted of asphalt road, shoulder/roadside, and field area.

Description:

Waste Type: Equipment

Waste Description:

Five to 10 rads per hour were measured where the valve bonnet came to rest in the field. Measurements of 1,000 millirads per hour were taken where it hit the road; 20,000 to 5,000 counts per minute on 18.6 square meters (200 square feet) of road; and 25,000 to 50,000 on the

ReClassification:

ReClassification:

surface of the field adjacent to the valve bonnet.

Site Code: UPR-100-N-12 Classification: Accepted

Site Names: UPR-100-N-12, Spacer Transport Line

Leak, UN-100-N-12

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1979

Site The site began as a 0.6 by 0.9-meter (2 by 3-foot) diameter and 0.46-meter (1.5-foot) deep sink hole. The dimensional limits of the extent of contamination are not provided in reference

material. The dimensions for the observed sink hole have been reported. The extent of

contamination migration to groundwater is assumed.

Waste Type: Water

Waste Description:

The release consisted of 946,000 liters (250,000 gallons) of storage basin water containing 0.19 curies of cobalt-60, 0.4 curies of cesium-137, and 0.00057 curies of plutonium-239/240. The water was originally from the fuel storage basin and had been used to help dislodge fuel spacers through the spacer transport line. Excavated soil was checked for radioactivity and read 50 to 100 millirem per hour.

Site Code: UPR-100-N-13 Classification: Accepted

Site Names: UPR-100-N-13, 1314-N Loading Station, **ReClassification:**

1314-N Drywell Overflow, UN-100-N-13

Site Type: Unplanned Release Start Date: 1973

Site Status: Inactive End Date:

Site The 1314-N Liquid Waste Loadout Station is a transfer station consisting of numerous valves,

Description: pumps, underground/overhead piping and couplings, and underground tanks.

Waste Type: Water

Waste The release consisted of 289 liters (75 gallons) of spent decontamination solution containing

Description: 0.011 curies.

Site Code: UPR-100-N-14 Classification: Accepted

Site Names: UPR-100-N-14, 119-N Drain System Leak, ReClassification:

UN-100-N-14

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site Soil near the 119-N Sample Building was contaminated during the release.

Description:

Waste Type: Process Effluent

Waste The release consisted of effluent water containing 0.0008 curies of beta/gamma activity.

Description:

Site Code: UPR-100-N-15 Classification: Accepted

Site Names: UPR-100-N-15, 108-N Neutralization ReClassification: Rejected (9/11/2000)

Sump Spill, UN-116-N-15, UN-100-N-15,

Acid Spill at 108-N

Site Type:Unplanned ReleaseStart Date:1981Site Status:InactiveEnd Date:1981

Site The release site is concrete structures and a graveled field. There is no evidence of the spill at the

Description: site.

Waste Type: Chemicals

Waste The release consisted of sulfuric acid.

Description:

Site Code: UPR-100-N-17 Classification: Accepted

Site Names: UPR-100-N-17, 166-N Diesel Oil Supply ReClassification:

Line Leak, UN-100-N-17

Site Type:Unplanned ReleaseStart Date:1966Site Status:InactiveEnd Date:1966SiteThe site is an unplanned release that occurred at the 166-N Tank Farm.

Description:

Waste Type: Oil

Waste The leak consisted of diesel oil.

Description:

Site Code: UPR-100-N-18 Classification: Accepted

Site Names: UPR-100-N-18, 166-N Four-inch Diesel ReClassification:

Oil Supply Line to 184-N Leak, UN-100-N-

18

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site

Description:

Waste Type: Oil

Waste

The leak consisted of diesel oil.

Description:

Site Code: UPR-100-N-19 Classification: Accepted

Site Names: UPR-100-N-19, 184-N Day Tank Fuel Oil ReClassification:

Spill, UN-116-N-19, UN-100-N-19

Site Type: Unplanned Release Start Date: 1984

Site Status: Inactive End Date:

Site A site visit in July 1999 found that the Day Tanks have been removed. The tank foundations are

Description: located inside an area surrounded by light post and chain.

Waste Type: Oil

Waste The release consisted of No. 6 fuel oil.

Description:

Site Code: UPR-100-N-20 Classification: Accepted

Site Names: UPR-100-N-20, 166-N Two-inch Diesel ReClassification:

Oil Return Line Leak, UN-116-N-20, UN-

100-N-20

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site

Description:

Waste Type: Oil

Waste The release consisted of Number 2 diesel oil.

Description:

Site Code: UPR-100-N-21 Classification: Accepted

Site Names: UPR-100-N-21, 184-N Diesel Oil Day ReClassification:

Tank Overflow, UN-116-N-21, UN-100-N-

21

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The Day Tanks have been removed. The tank foundations are located inside a chained area

Description: marked 184-ND.

Waste Type: Oil

Waste The release consisted of Number 2 diesel oil.

Description:

Site Code: UPR-100-N-22 **Classification:** Accepted

Site Names:

UPR-100-N-22, 184-N Diesel Oil Supply Line Leak No. 1, UN-100-N-22, UN-116-N- **ReClassification:**

22

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Site

Description:

Waste Type: Oil

Waste

The release consisted of Number 2 diesel oil.

Description:

Site Code: UPR-100-N-23 Classification: Accepted

Site Names: UPR-100-N-23, 184-N Diesel Oil Supply

Unplanned Release

Line Leak No. 2, UN-100-N-23, UN-116-N-

Start Date:

ReClassification:

Site Status: Inactive

End Date:

Site

Description:

Site Type:

Waste Type: Oil

Waste

The release consisted of Number 2 diesel oil.

Description:

Site Code:

UPR-100-N-24

Classification: Accepted

ReClassification:

Start Date:

Site Names: UPR-100-N-24, 166-N Fuel Oil Supply

Line Leak, UN-116-N-24, UN-100-N-24

Site Type: Unplanned Release

End Date: Inactive

Site

Description:

Site Status:

Waste Type:

Waste

Description:

An unknown amount of Number 6 fuel oil.

Site Code: UPR-100-N-25 **Classification:** Accepted

UPR-100-N-25, Uncontrolled Venting of **Site Names:**

1310-N Tank, UN-100-N-25

ReClassification:

Site Type: Unplanned Release **Start Date:**

Inactive **Site Status:**

End Date:

Site

There is no visual evidence of this release.

Description:

Waste Type: Chemicals

Waste The release consisted of primary loop water and decontamination solution containing phosphoric

Description: acid and diethylthiourea. Radiological surveys found a maximum of 20,000 counts per minute

after the release.

Site Code: UPR-100-N-26 Classification: Accepted

Site Names: UPR-100-N-26, Backflow of Radioactive ReClassification:

Waste in 1314-N Facility, UN-100-N-26

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site

Description:

Waste Type: Chemicals

Waste The release consisted of reactor decontamination solution containing phosphoric acid and

Description: diethylthiourea.

Site Code: UPR-100-N-29 Classification: Accepted

Site Names: UPR-100-N-29, 1304-N Dump Tank, ReClassification:

Emergency Dump Tank Bypass Line Leak,

UN-100-N-29

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site

Description:

Waste Type: Water

Waste The leak consisted of primary coolant water containing radioactive fission and activation

Description: products, mostly manganese-56 and sodium-24.

Site Code: UPR-100-N-30 Classification: Accepted

Site Names: UPR-100-N-30, 1304-N Dump Tank, ReClassification:

Emergency Dump Tank Overflow, UN-100-

N-30

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site includes the ground surrounding the 1304-N Emergency Dump Tank. There is no visual

Description: evidence of this release.

Waste Type: Water

Waste The release consisted of primary coolant water containing fission and activation products

Description: contaminating the area to a maximum of 500 counts/minute.

Site Code: UPR-100-N-31 Classification: Accepted

Site Names: UPR-100-N-31, Radioactive Effluent **ReClassification:**

Water Spill Near 1301-N, UN-100-N-31

Site Type: Unplanned Release Start Date: 1974

Site Status: Inactive End Date:

Site The release site is not currently marked or posted.

Description:

Waste Type: Water

Waste The release consisted of radioactive effluent containing fission and activation products. The **Description:** gross beta/gamma concentration of the spilled water was 700 disintegrations/minute/milliliter.

Site Code: UPR-100-N-32 Classification: Accepted

Site Names: UPR-100-N-32, 1304-N Dump Tank, ReClassification:

Emergency Dump Tank Bypass Line Leak,

UN-100-N-32

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site

Description:

Waste Type: Water

Waste The release consisted of radioactive effluent water containing fission and activation products. A

Description: mud sample read 20,000 counts/minute. The water was analyzed for gross activity. It was estimated that less than 10 millicuries of radioactive material remained on the ground.

Site Code: UPR-100-N-33 Classification: Accepted

Site Names: UPR-100-N-33, 108-N Acid Transfer Spill, ReClassification: Rejected (9/11/2000)

UN-116-N-33, UN-100-N-33

Site Type:Unplanned ReleaseStart Date:1981Site Status:InactiveEnd Date:1981

Site The location of this release is a graveled lot at the 108-N Chemical Unloading Facility (CUF).

Description: There is no evidence of the spill at the site.

Waste Type: Chemicals

Waste The spill consisted of a solution containing 97% sulfuric acid.

Description:

Site Code: UPR-100-N-34 Classification: Accepted

Site Names: UPR-100-N-34, 108-N Tank Transfer, ReClassification: Rejected (9/11/2000)

Sulfuric Acid Line Break, UN-100-N-34

Site Type: Unplanned Release Start Date: 1980

Site Status: Inactive End Date: 1980

Site The release occurred in a concrete trench in a graveled lot. There is no evidence of the spill at the

Description: site.

Waste Type: Chemicals

Waste The release was a solution containing 94% sulfuric acid.

Description:

Site Code: UPR-100-N-35 Classification: Accepted

Site Names: UPR-100-N-35, 100-N Fuel Basin ReClassification:

Drainage System Leak, UN-116-N-35, 105-N Fuel Storage Basin Drainage System

Leak, UN-100-N-35

Site Type: Unplanned Release Start Date: 1986
Site Status: Inactive End Date: 1986

Site The release occurred at the 105-N Reactor Building.

Description:

Waste Type: Water

Waste The release consisted of radioactively contaminated water containing an estimated 1.6 curies **Description:** manganese-5, 0.4 curies cobalt-60, 0.3 curies niobium-95, 0.1 curies iodine-131, 0.4 curies

cesium-137 and 0.3 curies cerium-144.

Site Code: UPR-100-N-36 Classification: Accepted

Site Names: UPR-100-N-36, 184N Annex, 184N, Diesel ReClassification:

Generator Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The unit is in a graveled area previously disturbed from historic spills.

Description:

Waste Type: Oil

Waste Evidence of spills include stained gravel and a strong smell of petroleum products in the soil

Description: beneath (noted during an excavation).

Site Code: UPR-100-N-37 Classification: Accepted

Site Names: UPR-100-N-37, HGP Transformer Yard **ReClassification:**

Oil Stained Gravel

Site Type:Unplanned ReleaseStart Date:1966Site Status:InactiveEnd Date:1986

Site Transformers are sitting on a 3-meter (10-foot) square concrete pedestals on a gravel pad. Oil

Description: stains are visible at the base of every transformer in the yard.

Waste Type: Oil

Waste Description:

Dielectric fluid consisting of mineral oil has seeped onto the ground. Washington Public Power Supply System (WPPSS) personnel have verbally stated that polychlorinated biphenyls (PCBs) have never been used in the transformers. However, the RCRA Facility assessment report states that, based on the dates of operation, the presence of PCB's is suspect.

that, based on the dates of operation, the presence of PCB's is suspect.

Site Code: UPR-100-N-38 Classification: Accepted

Site Names: UPR-100-N-38, 116-N-2 Facility Liquid ReClassification: Rejected (9/11/2000)

Unplanned Release, 100-N Spring 1983

Caustic, Truck Spill 116-N-2

Site Type: Unplanned Release Start Date: 1983
Site Status: Inactive End Date: 1983

Site The site is level and graveled. A pipe is present that carried sodium hydroxide from the tankers to the 1310-N Facility (116-N-2). The site is located in a radiation zone, but the sodium hydroxide

should not have been radioactively contaminated. The 116-N-2 Facility complex consists of piping, pumps, a transfer tank (commonly referred to as the silo) and a large, spherical storage tank (commonly referred to as the golf ball). The site was used as a collection tank for N Reactor primary piping decontamination wastes. The 3.4E+06-liter (9.0E+05-gallon) spherical tank is partially buried in the ground. A compacted soil radiation barrier, 7.6 meters (25 feet) high,

borders the tank on three sides.

Waste Type: Chemicals

Waste Three hundred eighty liters, (100 gallons) of sodium hydoxide was spilled to the ground during

Description: offloading operations in a radiation zone.

Site Code: UPR-100-N-39 Classification: Accepted

Site Names: UPR-100-N-39, Corridor 22 Suspect ReClassification:

Liquid Unplanned Release (cleaned up)

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site consists of a concrete slab and hatch cover posted "Surface Contamination." The

Description: surrounding area is gravel.

Waste Type: Water

Waste Several hundred liters of radioactively contaminated water from the Fission Product Filter Trap

Description: overflowed and discharged to the ground.

Site Code: UPR-100-N-40 Classification: Rejected (Proposed)

Site Names: UPR-100-N-40, Regeneration Waste **ReClassification:**

Transport System Liquid UPR 1 (06/14/86, cleaned up), 6/14/86 163-N Cation/Anion Regeneration Waste Spill, UN-116-N-27

Site Type: Unplanned Release Start Date: 1986

Site Status: Inactive End Date:

Site The surface of the area is graveled.

Description:

Waste Type: Process Effluent

Waste The liquid released was regeneration waste from ion exchange columns in the 163-N Facility,

Description: consisting of sulfuric acid and sodium hydroxide.

Site Code: UPR-100-N-41 Classification: Rejected (Proposed)

Site Names: UPR-100-N-41, Regeneration Waste

Transport System Liquid UPR 2, 163-N

Regeneration, Waste Spill

Site Type: Unplanned Release Start Date: 1986

Site Status: Inactive End Date:

Site The spill occurred at the 163-N Regeneration Waste Sump near the northwest corner of the 163-N

ReClassification:

Description: Building and formed a small pond in this area.

Waste Type: Water

Waste The liquid released was regeneration waste consisting of sulfuric acid from ion exchange columns in the 163-H Facility. Soda ash was added to the spill to help neutralize the liquid.

Site Code: UPR-100-N-42 Classification: Accepted

Site Names: UPR-100-N-42, 184-N Day Tank Area ReClassification:

Liquid Unplanned Release, 10/9/87 184-N,

Day Tank Diesel Oil Spill

Site Type: Unplanned Release Start Date: 1987

Site Status: Inactive End Date:

Site The 184-N Day Tank Area is surrounded by a 1.5-meter (4.8-foot) concrete wall that is 25 meters

Description: (85 feet) long by 12.8 meters (42 feet) wide, has a sand floor, and contains two 130,000 liters

(35,000 gallons) Number 6 fuel oil tanks and one 30,000 liter (8,000 gallon) diesel oil tank.

Waste Type: Oil

Waste The site received diesel oil.

Description:

Site Code: UPR-100-N-43 Classification: Accepted

Site Names: UPR-100-N-43, 166-N / 184-N Pipelines ReClassification:

Liquid Unplanned Release 2 (4/26/89,

cleaned up)

Site Type: Unplanned Release Start Date: 1989

Site Status: Inactive End Date:

Site The release site occurred at the oil supply piping from the 116-N to 184-N Buildings.

Description:

Waste Type: Oil

Waste The spill was diesel oil from the diesel oil supply line to the 184-N Day Tank.

Description:

Site Code: UPR-600-17 Classification: Accepted

Site Names: UPR-600-17, 600 Area Patrol Boat Spill, ReClassification: Rejected (9/11/2000)

UN-600-17

Site Type:Unplanned ReleaseStart Date:1986Site Status:InactiveEnd Date:1986

Site The site of the release is a concrete boat ramp and the shoreline, periodically flooded as the

Description: Columbia River rises daily and seasonally.

Waste Type: Oil

Waste The release consisted of 268.4 liters (70.9 gallons) of gasoline.

Description:

200-BP-6

Site Code: 217-B NU Classification: Accepted

Site Names: 217-B NU, 217-B Neutralization Unit, **ReClassification:**

Elementary Neutralization Unit/217-B

Building

Site Type: Neutralization Tank Start Date: 1993

Site Status: Inactive End Date:

Site The site is a structural steel frame building with corrugated asbestos/cement siding, and a concrete

Description: slab. The site has one room containing the deactivated demineralizer, chemical regeneration

tanks, and piping. Entrances to this unit have been sealed.

Waste Type: Chemicals

Waste Demineralizer operations generated waste when the ion exchange columns were regenerated.

Description: Sodium hydroxide was used to regenerate the anion column, while sulfuric acid was used to

regenerate the cation column. The sulfuric acid was neutralized with sodium carbonate, while the sodium hydroxide was neutralized with monosodium phosphate prior to discharge the 216-B-

63 trench.

Waste Type: Asbestos (non-friable)

Waste The building has concrete/asbestos corrugated siding.

Description:

Site Code: 221-B NANU Classification: Accepted

Site Names: 221-B NANU, 221-B Nitric Acid ReClassification:

Neutralization Unit, 221-B Elemenary Neutralization Unit for Nitric Acid

Site Type: Neutralization Tank Start Date: 1980

Site Status: Active End Date:

Site This site is a neutralization unit.

Description:

Waste Type: Process Effluent

Waste Approximately 400 gallons (1,500 liters) per year of 1 Molar nitric acid is neutralized with 350

Description: pounds (160 kilograms) per year of sodium carbonate.

Site Code: 221-B SDT Classification: Accepted

Site Names: 221-B SDT, 221-B Settle and Decant Tank, ReClassification:

B Plant Settle and Decant Tank, 221-B-8-1 and 221-B-8-2, 221-B-TK-8-1 and 221-B-

TK-8-2

Site Type: Settling Tank Start Date: 1945

Site Status: Inactive End Date:

Site The 221-B Settle and Decant Tank consists of two cylindrical tanks in Cell 8: 221-B-8-1 and 221-

Description: B-8-2. The two tanks are isolated and decommissioned. The tanks were used in the neutralized

current acid waste pretreated mission.

Waste Type: Chemicals

Waste The unit received neutralized current acid waste during the pretreatment mission, where the

Description: tanks acted as settling tanks. Prior to this, the tanks were used in the cesium and strontium

recovery efforts.

Site Code: 221-B SHNU Classification: Accepted

Site Names: 221-B SHNU, 221-B Sodium Hydroxide ReClassification:

Neutralization Unit, 221-B Elementary Neutralization Unit for Sodium Hydroxide

Site Type: Neutralization Tank Start Date: 1984

Site Status: Active End Date:

Site This site is a neutralization unit.

Description:

Waste Type: Process Effluent

Waste Approximately 400 gallons (1,514 liters) per year of 2 Molar sodium hydroxide is neutralized

Description: with 800 pounds (360 kilograms) per year of monosodium phosphate.

Site Code: 221-B-WS-1 Classification: Accepted

Site Names: 221-B-WS-1, B Plant Storage ReClassification:

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site This cell is a heavy walled concrete pit with a concrete block cover. The cover is the only means

Description: of entry. The cell is currently used for contained storage.

Waste Type: Misc. Trash and Debris

Waste Material stored in this area includes light bulbs with lead solder, and other solid mixed waste.

Description:

Site Code: 221-B-WS-2 Classification: Accepted

Site Names: 221-B-WS-2, B Plant Waste Piles ReClassification:

Site Type: Storage Start Date: 1945

Site Status: Inactive End Date:

Site The TPA and the RCRA Part A Permit Application classify this site as a waste pile that lies within

Description: a containment building. The site encompasses solid mixed waste (jumpers, counterweights, failed

process equipment, and shielding) that is stored in cells and on the canyon deck.

Waste Type: Equipment

Waste This waste includes lead shielding in the cells and on the canyon deck.

Description:

Waste Type: Equipment

Waste This waste includes jumpers, and other failed or isolated process equipment which may have

Description: been contaminated with wastes from fuel processing.

Site Code: 221-B-26-1 Classification: Accepted

Site Names: 221-B-26-1, 221-B-TK-26-1, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank 1

Site Type: Storage Tank Start Date: 1945

Site Status: Inactive End Date:

Site This tank is a stainless steel cylindrical tank.

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank is maintained ready for use on an as needed basis.

Site Code: 221-B-27-2 Classification: Accepted

Site Names: 221-B-27-2, 221-B-TK-27-2, 221-B Tank ReClassification:

27-2

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The tank is only visible if the cell cover blocks are removed. The tank is a 7,571 liter (2000)

Description: gallon) stainless steel tank.

Waste Type: Process Effluent

Waste The tank contained organic mixed waste used in the recovery and purification of strontium and

Description: cesium.

Site Code: 221-B-27-3 Classification: Accepted

Site Names: 221-B-27-3, 221-B-TK-27-3, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank 2

Site Type: Storage Tank Start Date: 1963

Site Status: Inactive End Date:

Site This tank is a carbon steel cylinder, with an internal cooling coil and 17 nozzles on the head of the

Description: tank.

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank contained waste as of September 1996.

Site Code: 221-B-27-4 Classification: Accepted

Site Names: 221-B-27-4, 221-B-TK-27-4, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank 3

Site Type: Storage Tank Start Date: 1963

Site Status: Inactive End Date:

Site This tank is a rectangular, stainless steel slab tank.

•

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program.

Site Code: 221-B-28-3 Classification: Accepted

Site Names: 221-B-28-3, 221-B-TK-28-3, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank 4

Site Type: Storage Tank Start Date: 1963

Site Status: Inactive End Date:

Site This tank is a stainless steel cylindrical tank.

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank contained waste as of September 1996.

Site Code: 221-B-28-4 Classification: Accepted

Site Names: 221-B-28-4, 221-B-TK-28-4, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank 5

Site Type: Storage Tank Start Date: 1963

Site Status: Inactive End Date:

Site This tank is a rectangular, stainless steel slab tank.

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank was empty as of September 1996.

Site Code: 221-B-29-4 Classification: Accepted

Site Names: 221-B-29-4, 221-B-TK-29-4, B Plant ReClassification:

Radioactive Organic Waste Storage Tank

#7, 221-B TK-29-4

Site Type: Storage Tank Start Date: 1961

Site Status: Inactive End Date:

Site This tank is a stainless steel cylindrical tank.

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank was empty as of September 1996.

Site Code: 221-B-30-3 Classification: Accepted

Site Names: 221-B-30-3, 221-B-TK-30-3, B Plant ReClassification:

Radioactive Organic Waste Solvent Tank

#6, 221-B TK-30-3

Site Type: Storage Tank Start Date: 1963

Site Status: Inactive End Date:

Site This tank is a rectangular, stainless steel slab tank.

Description:

Waste Type: Chemicals

Waste This tank received organic mixed waste from the solvent extraction process of the strontium

Description: recovery program. The tank was empty as of September 1996. This tank is maintained so it can

receive waste on an as needed basis.

Site Code: 224-B Classification: Accepted

Site Names: 224-B, 224-B Concentration Facility **ReClassification:**

Site Type:Process Unit/PlantStart Date:1945Site Status:InactiveEnd Date:1976

Site The 224-B Concentration Facility is a roughly rectangular concrete block structure.

Description:

Waste Type: Chemicals

Waste The building contains residual processing agents. Hazardous constituents include mercury,

Description: polychlorinated biphenyls, cleaning agents, and radionuclides (including plutonium, americium, strontium, cobalt, and cesium). An inventory of radioactive material remaining in the 224-B hot cells (1995), based on average measurements, is estimated to be 1.1 curies of Cs-137, 22 curies of Sr-90, 3.7 curies of Co-60, 5 curies of Am-241, 31 curies of Pu-239 and 2 curies of other

plutonium isotopes.

Waste Type: Equipment

Waste This facility contains radiologically contaminated equipment, and concrete surfaces.

Description:

Site Code: 226-B HWSA Classification: Accepted

Site Names: 226-B HWSA, 226-B Hazardous Waste ReClassification: Rejected (9/6/2000)

Storage Area

Storage Pad (<90 day) **Start Date:** 1985 **Site Type:**

End Date: Site Status: Active

Documents dated 1987 and 1992 described the site known as the 226-B Hazardous Waste Storage Site Area (HWSA) as a concrete pad surrounded by a light chain barricade. It was posted with "226-B **Description:**

> Hazardous Waste 90-Day Staging Area", and "PCB 30 Day Storage" signs. Additional information was provided by Ron Weissenfels (B-Plant Engineer) in 1998 that described the area as temporarily being three separate storage pads located north of B-Plant, and adjacent to the

211-BA and 219-B Buildings.

However, a field visit in April 2000 found only one small, locked metal shed labeled "226-B < 90 Day Storage - Dangerous/Hazardous Waste". Correspondence with the responsible contractor confirmed that the three pads were consolidated into one location prior to the area being turned over to WESF (Waste Encapsulation and Storage Facility).

Waste Type: Chemicals

Waste The staging areas temporarily store a wide variety of dangerous waste. Examples of waste

Description: previously stored here include: halogenated hydrocarbons, caustic liquids, acids, solvents, toxic

chemicals and coolants and PBC's.

The Following Sites Were Consolidated With This Site:

Site Code: 200-E-32

Site Names: 200-E-32, 226-B Pad East Side 90-Day Waste Accumulation Area

Reason: **Duplicate Site**

Site Code: 200-E-16 **Classification:** Accepted

200-E-16, B Plant Waste Concentrator, **Site Names: ReClassification:**

Low Level Waste Concentrator, Single-

Stage Thermal Siphon Reboiler

Site Type: Evaporator Start Date: Inactive **End Date:**

Site

Description:

Site Status:

Waste Type: Process Effluent

Waste

Description:

Site Code: 200-E-28 **Classification:** Accepted

Site Names: 200-E-28, 221-B Building Steam **ReClassification:**

Condensate Release

Start Date: 1990 Site Type: Unplanned Release

Site Status: Inactive **End Date:**

The release occurred through the 221-B Canyon wall expansion joint located between cells 38 Site

and 39. Visible portions of the expansion joint are 3/4" to 1" wide however, the actual point of **Description:**

release is below grade and is not visible. The expansion joint is located 40 feet from the west end

of the building between cells 38 and 39.

Waste Type: Steam Condensate

Waste The waste was approximately 80,000 to 230,000 gallons of steam condensate contaminated with **Description:** Cs-137 and Sr-90 that leaked through the expansion joint between cells 38 and 39 of the B Plant

Canyon Building directly into the soil column.

Site Code: 200-E-30 Classification: Accepted

Site Names: 200-E-30, 291-B Sand Filter, 221-B Stack ReClassification:

Sand Filter

Site Type:Sand FilterStart Date:1948Site Status:InactiveEnd Date:1997

Site It consists of a reinforced concrete structure filled with sand and gravel and a roof of pre cast **Description:** concrete slabs supported by the walls and concrete beams. The unit is partially below grade. The

concrete slabs supported by the walls and concrete beams. The unit is partially below grade. The unit measures 33.5 meters (110 feet) by 15.25 meters (50 feet) by 4.8 meters (16 feet) high. It is

posted with appropriate radiological signs.

Waste Type: Soil

Waste The B Plant canyon ventilation passed through the sand filter from 1948-1952, during the **Description:** bismuth phosphate fuel processing activities. It was active again periodically through the year

bismuth phosphate fuel processing activities. It was active again periodically through the years as an emergency back up for the HEPA Filters. It is currently in a standby mode. In 1994, a the radionuclide inventory was estimated to be 3000 ci of Strontium-90 and 2000 ci of Cesium-137.

Site Code: 200-E-137 Classification: Accepted

Site Names: 200-E-137, 291-B Exhaust Stack, 291-B-1 ReClassification:

Site Type:StackStart Date:1944Site Status:InactiveEnd Date:1998

Site The unit consists of a reinforced concrete stack, lined with acid-resistant brick resting on an **Description:** octagonal, two-tiered foundation of brick and concrete. The stack is 61 meters (200 feet) high

and 4.3 meters (14 feet) in diameter at the base.

Waste Type: Process Effluent

Waste The air exhaust system was contaminated with radioactive particulates.

Description:

Site Code: 200-E-138 Classification: Accepted

Site Names: 200-E-138, 296-B-1 Exhaust Stack, 291-B **ReClassification:**

Replacement Stack, Canyon Exhaust System, Canyon Ventilation Upgrade

Site Type: Stack Start Date: 1998

Site Status: Active End Date:

Site The 296-B-1 exhaust stack is a 29 meter (95 foot) carbon steel pipe anchored to the south side of

Description: the 221-B building.

Waste Type: Process Effluent

Waste Filtered canyon air is exhausted through the stack.

Description:

Site Code: B PLANT FILTER Classification: Accepted

Site Names: B PLANT FILTER, B Plant Filter, 221-B-

TK-34-2 Decant Filter, Filter F-34-4

Site Type: Process Unit/Plant Start Date: 1945

Site Status: Inactive End Date:

Site The Filter F-34-4 is a roughly cylindrical unit that sits inside and above Tank 221-B-34-2. The

Description: filter was a part of the neutralized current acid waste treatment mission.

Waste Type: Chemicals

Waste The unit was never used to process neutralized current acid waste. However, cell and tank

Description: contamination from previous operations may have been transferred to the filter.

Site Code: WESF Classification: Accepted

Site Names: WESF, Waste Encapsulation and Storage

Facility, 225-B

ReClassification:

ReClassification:

Site Type:StorageStart Date:Site Status:ActiveEnd Date:

Site The Waste Encapsulation and Storage Facility is a TSD site within the 225-B Building, which is

Description: on the west side of 221-B Building (B Plant).

SubSites:

SubSite Code: WESF:1

SubSite Name: WESF:1, Waste Encapsulation and Storage Facility Tank 100 System, WESF TK-100 System

Classification: Accepted

ReClassification:

Description: The TK-100 System was used as a catch tank to transfer low-level radioactive liquid waste

from WESF through B-Plant to the Double-Shell Tank System. Closure activities were completed in September 1998 and included sampling and analysis of the piping rinsate, removing the tank to a permitted TSD facility (B Plant Complex), removing any waste residues from the vault, and decontaminating and visually inspecting the vault. Piping (floor drains and sump) rinsate was sampled on July 14 and 15, 1998, and analyzed for 1,1,1-tri-chloroethane. All eight samples (K0N378 through K0N385) had less than detectable levels of

1,1,1-trichloroethane.

200-BP-7

241-B-101 **Classification:** Accepted **Site Code:**

241-B-101, 241-B-TK-101 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1945 1974 **Site Status:** Inactive **End Date:**

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 9 meters (30 feet) Site **Description:**

high, with a capacity of 2,017,405 liters (533,000 gallons). The bottom is 11.3 meters (37 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to

the original single-shell design, having a dished bottom and a 5.2 meters (17 feet) operating

depth. The tank is passively ventilated.

Waste Type: Storage Tank

Waste Initially tank B-101 received metal waste in 1945. The tank received and transferred waste via **Description:**

cascade lines from 1945 until 1963. During 1953, B-101 processed feed for U Plant. From 1953 until 1963, the tank contained supernatant containing evaporator bottoms waste from 241-B tanks. During 1957, in-farm scavenged feed was sent to the 244-CR Vault. From 1960 until 1970, B-101 received wastewater. Also, it was found that during 1960 wastewater leaked into the pipe encasement which drained to B-101. During 1963 the tank received PUREX coating waste. B-101 received B Plant high-level waste (Cell 23) from 1969 until 1970. From 1970 until 1973, the tank received B Plant, Cell 23 evaporator bottoms. The tank also received bismuth phosphate metal waste and waste in route to in-tank solidification. Presently, the waste material is classified as non-complexed and has a total waste volume of 427,705 liters (113,000 gallons). Sludge comprises the total 427,705 liters (113,000 gallons). There is no saltcake or pumpable liquid and 6,000 gallons of drainable interstitial liquid remaining. An analysis was conducted on a B-101 sludge sample in February 1976. The sample was found to have a consistency of soft mud and was dark brown. A heat generation rate based on strontium-89, strontium-90, and cesium-137 was calculated to be 0.0201 watts/liter of sludge. The resulting solids remaining in this tank (based on core samples) contain an estimated 4 million Curies of strontium (92,000 BTU/h). The curie content listed is not decayed to a consistent date;

therefore, a cumulative total is inappropriate.

Reported Date: April 30, 1996

Site Code: 241-B-102 **Classification:** Accepted

241-B-102, 241-B-TK-102 ReClassification: **Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1945 1978 **Site Status:** Inactive **End Date:**

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 9 meters (30 feet) Site high, with a capacity of 2,017,405 liters (533,000 gallons). The bottom is 11.3 meters (37 feet) **Description:**

below grade, and the dome is located below grade for shielding purposes. This type was built to the original single-shell design, having a dished bottom and a 5.2 meters (17 feet) operating depth. Tank 241-B-102 is the second tank in a "cascade" connecting it to tanks 241-B-101 and

241-B-103. The tank is passively ventilated.

Waste Type: Storage Tank

Waste Description:

Tank 241-B-102 went into service in 1945 by receiving metal waste produced by the bismuth phosphate process. The tank was sluiced in 1953 to remove the metal waste for uranium recovery then filled with a transfer from tank 241-B-105 (the active receiver tank for the 242-B Evaporator). Most of the contents of the tank were sent to tank 241-C-112 in 1957 for ferrocyanide scavenging of the supernate. Later that year the tank received water. The tank stood idle until 1963, when it began to receive cladding waste supernate from other tanks. The tank received a supernatant transfer from 241-B-101 in 1969 and was receiving high level waste from B Plant. Most of this supernate was transferred out of the tank in 1970. The tank received ion-exchange waste (B Plant) which was later transferred in a large supernate transfer in 1971. The tank also received low level waste from B Plant (1972), water waste transfer and pumpable liquids from other single-shell tanks (B-105, 107, and 110) that were being taken out of service (1972-1976). During this time tank 241-B-102 was also transferring supernate to tanks 241-B-103, 241-B-106, and 241-SX-106. The tank also received cladding removal waste supernate from the Plutonium-Uranium Extraction (PUREX) process and supernate from the fission product recovery process at B Plant. The tank also received ion exchange waste and evaporator bottoms from 241-B, -BX, and -C tank farms. Presently, the waste material is classified as noncomplexed and has a total waste volume of 121,120 liters (32,000 gallons). Sludge comprises 68,130 liters (18,000 gallons) of the tank contents, saltcake 37,850 liters (10,000 gallons) and there is 15,140 liters (4,000 gallons) of drainable supernatant liquid remaining. The waste level is very low 17.8 centimeters (~7 inches).

Reported Date: April 30, 1996

Site Code: 241-B-103 Classification: Accepted

Site Names: 241-B-103, 241-B-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1945Site Status:InactiveEnd Date:1977

Site Description:

The unit is a single-shell tank constructed of .3 meter (1 foot) thick reinforced concrete with a 6.4 millimeters (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foo) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 4 foot 1.2 meters (4 feet) radius knuckle. The tank has a 5.2 meters (17 feet) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. Tank 241-B-103 is the third and final tank in a "cascade" connecting to tanks 241-B-101 and 241-B-102. The cascade overflow height is approximately 4.86 meters (192 inches) from the tank bottom (at the sidewall) and .61 meters (2 feet) below the top of the steel liner. The tank is passively ventilated.

Waste Type: Storage Tank

Waste Description:

Tank 241-B-103 went into service in 1945 by receiving waste cascaded from tank 241-B-102 until it was declared full in 1946. The tank was sluiced in 1953 for uranium recovery. From 1954 until 1963 the tank received supernate, evaporator bottoms waste and unknown waste from an unknown source. The tank also received bismuth phosphate metal waste; PUREX coating waste; and supernatant containing ion exchange waste, N Reactor waste, organic wash waste:

PNL waste, REDOX high-level waste, coating waste, evaporator bottoms, B Plant low-level waste, decontamination waste, tributyl phosphate waste, and laboratory waste from 241-B, -BX, and -C tank farms. Additional sources of waste are first and second cycle waste from B Plant and in-tank solidification (ITS-1 & ITS-2) evaporator bottoms. Presently, the waste material is classified as non-complexed and has a total waste volume of 59,000 gallons (223,315 L). Sludge is reported to comprise 59,000 gallons (223,315 L) of the tank contents with no saltcake, drainable, or pumpable liquid remaining. However, the Tank Layer Model (Agnew et al. 1994), estimates that the tank contains mostly saltcake 56,000 gallons (211,960 L), with a small amount of metal waste 3,000 gallons (11,355 L). The waste level in the tank is (~14 inches) 35 cm. Reported Date: May 31, 1996

Site Code: 241-B-104 Classification: Accepted

Site Names: 241-B-104, 241-B-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1972

Site Description:

The single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and at 1.2 meters (4 foot) radius knuckle. The tank has a 5.2 meters (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. The tank is passively ventilated.

Waste Type: Storage Tank

Waste Description:

Tank 241-B-104 is equipped to cascade to tank 241-B-105 and is first in the three-tank cascade flow series. The tank received bismuth phosphate first and second-cycle waste; evaporator bottoms, and supernatant containing evaporator bottoms from the 241-B tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 371,000 gallons (1,404,235 L). Sludge is reported to comprise 301,000 gallons (1,139,285 L) and saltcake 69,000 (261,165 L). There is 40,000 gallons (151,400 L) pumpable liquid remaining and 47,000 gallons (177,895 L) of drainable liquid remaining. Drainable liquid includes 46,000 gallons (174,110 L) interstitial and 1,000 gallons (3,785 L) of supernatant liquid. The volume of waste converts to a waste level of almost 11 feet (3.4 m). More sample material is needed for full characterization of the waste.

Reported Date: May 31, 1996

Site Code: 241-B-105 Classification: Accepted

Site Names: 241-B-105, 241-B-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1972

Site Description:

The single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 5.2 meters (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. The tank is passively ventilated.

Waste Type: Storage Tank

Waste Description:

Tank 241-B-105 is equipped to receive waste via cascade from tank B-104 and cascade to tank 241-B-106 and is second in the three-tank cascade flow series. The tank received bismuth phosphate first and second-cycle waste and flush water containing evaporator bottoms from the 241-B tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 306,000 gallons (1,158,210 L). Sludge is reported to comprise 40,000 gallons (151,400 L) and saltcake 266,000 (1,006,810 L). There is 23,000 gallons (87,055 L) of drainable liquid remaining and no pumpable liquid remaining. The volume of waste converts to a waste level of almost 9 feet (2.7 m). No samples have been taken from tank 241-B-105.

Reported Date: May 31, 1996

Site Code: 241-B-106 Classification: Accepted

Site Names: 241-B-106, 241-B-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1977

Site Description:

The single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 6.4 millimeters (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meter (4 foot) radius knuckle. The tank has at 5.2 meters (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes.

Waste Type: Storage Tank

Waste The tank received bismuth phosphate first and second-cycle waste; Hanford Laboratory operations waste; supernatant containing tributyl phosphate waste; 224-U wates, PNL waste, evaporator bottoms, B Plant low-level waste, ion exchange waste, and bismuth phosphate first-

cycle waste from 241-B, -BX, -BY, and -C tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 442,845 liters (117,000 gallons). Sludge is reported to comprise 439,060 liters (116,000 gallons) and supernatant liquids comprise 3,785 liters (1,000 gallons). There is 26,495 liters (7,000 gallons) of drainable liquid remaining and no pumpable liquid remaining. The volume of waste is between 100.6-96.5 centimeters (39.6-38 inches). More sample material is needed for full characterization of tank waste.

Reported Date: May 31, 1996

Site Code: 241-B-107 Classification: Accepted

Site Names: 241-B-107, 241-B-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1945Site Status:InactiveEnd Date:1969

Site Description:

The single-shell tank is constructed of .3 meter (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 feet) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 feet) radius knuckle. The tank has a 5.2 meters (17 feet) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes.

Waste Type: Storage Tank

Waste Description:

241-B-107 tank received PUREX coating waste; bismuth phosphate first-cycle waste; and supernatant containing bismuth phosphate first-cycle waste, bismuth phosphate second-cycle waste, and evaporator bottoms from the 241-B tanks. The tank also received uranium recovery waste, tri-butyl phosphate waste, non-complexed waste, 242-B evaporator saltcake, and wastewater. Presently, the waste material is classified as non-complexed and has a total waste volume of 165,000 gallons (624,525 L). Sludge is reported to comprise 164,000 gallons (620,740 L) and supernatant liquids comprise 1,000 gallons (3,785 L). There is 13,000 gallons (49,205 L) of drainable liquid remaining and 7,000 gallons (26,495 L) of pumpable liquid remaining. The volume of waste is about 4.5 feet (1.4 m) in the tank. There have been no samples taken of the tank waste.

Reported Date: May 31, 1996

Site Code: 241-B-108 Classification: Accepted

Site Names: 241-B-108, 241-B-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1945Site Status:InactiveEnd Date:1977

Site The single-shell tank is constructed of .3 meter (1 foot) thick reinforced concrete with a 6.4

Description: millimeters (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18

feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 feet) radius knuckle. The tank has a 5.2 meter (17 feet) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes.

Waste Type: Storage Tank

Waste Description:

241-B-108 tank received PUREX coating waste; bismuth phosphate first-cycle waste, and supernatant containing evaporator bottoms and ion exchange waste from the 241-B and -BY tank farms. The tank also received non-complexed waste and 242-B evaporator saltcake waste. Presently, the waste material is classified as non-complexed and has a total waste volume of 94,000 gallons (355,790 L). Sludge is reported to comprise the 94,000 gallons (355,790 L). There is 4,000 gallons (15,140 L) of drainable interstitial liquid remaining and no pumpable liquid remaining. The volume of waste converts to approximately 2.5 feet (.8 m) in the tank. There have been no samples taken of the tank waste.

Reported Date: May 31, 1996

Site Code: 241-B-109 Classification: Accepted

Site Names: 241-B-109, 241-B-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1977

Site Description:

The single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 5.2 meters (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meter (6-foot) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste 241-B-109 tank received PUREX coating waste; bismuth phosphate first-cycle waste, and supernatant containing evaporator bottoms, and ion exchange waste. The tank also received

coating waste from the 241-B, -BY, and -S tank farms, non-complexed waste, waste water, 224-U waste, and 242-B evaporator saltcake waste. Presently, the waste material is classified as non-

complexed and has a total waste volume of 127,000 gallons (480,822 L). There is disparity between sources for tank inventories. One source lists sludge for the total waste volume at 8,000 gallons (30,280 L) of drainable interstitial liquid. Another source reports the waste comprises 30,000 gallons (113,550 L) of unknown waste; 13,000 gallons (49,205 L) of sludge; and 84,000 gallons (317,940 L) of saltcake. The volume of waste converts to approximately 3.5 feet (1.1 m) in the tank. There have been no samples taken of the tank waste.

Reported Date: May 31, 1996

Site Code: 241-B-110 **Classification:** Accepted

Site Names: 241-B-110, 241-B-TK-110 **ReClassification:**

Site Type: Single-Shell Tank **Start Date:** 1945 **Site Status:** Inactive **End Date:** 1971

Site **Description:** The single-shell tank is constructed of .3 meter (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meter (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a (1.2 m4 foot) radius knuckle. The tank has a 5.2 meters (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2.017.405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meters (6-foot) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste **Description:** 241-B-110 tank received Bismuth phosphate first-cycle waste; bismuth phosphate second-cycle wastes; fission product waste; B Plant high-level waste (waste fractionization); B Plant waste from cells 5 and 6; B Plant flushes; and ion exchange waste; B Plant low-level waste; evaporator bottoms; non-complexed waste; decontamination waste; PUREX high-level waste; in-tank solidification waste; cesium recovery waste; and waste water. The waste material is classified as non-complexed and presently has a total waste volume of 931,001 liters (246,000 gallons). Sludge comprises the total except for 3,785 liters (1,000 gallons) of supernatant liquid. There is 64,345 liters (17,000 gallons) of pumpable liquid remaining. Level adjustments in 1982 and 1985 brought waste level measurements in the tank to current readings. The volume of waste converts to approximately 2.2 meters (7 feet) in the tank. While characterization of the solid contents has been performed, complete analysis of the upper layer must take place to more fully chartacterize this portion of the waste.

Reported Date: May 31, 1996

Site Code: 241-B-111 **Classification:** Accepted

Site Names: 241-B-111, 241-B-TK-111 **ReClassification:**

Site Type: Single-Shell Tank **Start Date:** 1945 Site Status: Inactive End Date: 1976

Site Description:

The single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 6.4 millimeter (0.25 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meter (4 foot) radius knuckle. The tank has a 5.2 meter (17 foot) operating depth. The tank is set on a reinforced concrete foundation 11.3 meter (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meters (6-foot) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste Description:

241-B-111 tank received bismuth phosphate first-cycle waste; bismuth phosphate second-cycle wastes; ion exchange waste (waste fractionization); fission product waste; B Plant waste from cells 5 and 6; evaporator bottoms; non-complexed waste; decontamination waste; PUREX highlevel waste; cesium recovery waste; and waste water. The waste material is classified as non-complexed and presently has a total waste volume of 237,000 gallons (897,045 L) comprised of sludge. There is 60,560 liters (16,000 gallons) of pumpable liquid and 83,270 liters (22,000 gallons) of drainable liquid remaining. The volume of waste converts to approximately 2.2 meters (7 feet) in the tank. More sample material is needed for full characterization of tank waste.

Reported Date: May 31, 1996

Site Code: 241-B-112 Classification: Accepted

Site Names: 241-B-112, 241-B-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1977

Site Description:

The single-shell tank is constructed of 1 foot (.3 m) thick reinforced concrete with a 0.25 inch (6.4 mm) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a 1.25 foot (.38 m) thick domed concrete top. The top of the steel liner is 18 feet (5.5 m) above the bottom of the tank (at the side wall). The tank has a dished bottom with a maximum depth of 12 inches (30 cm) below the side wall of the tank and a 4 foot (1.2 m) radius knuckle. The tank has a 17 foot (5.2 m) operating depth. The tank is set on a reinforced concrete foundation 37 feet (11.3 m) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 533,000 gallons (2,017,405 L). The tank was covered with approximately 7.25 feet (2.2 m) of overburden for shielding purposes. At present, the tank farm is enclosed by a 6-foot (1.8 m) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste Description:

241-B-112 tank received bismuth phosphate second-cycle wastes; B Plant low-level waste; fission product waste; ion exchange waste; evaporator bottoms from the 241-B and -BX tanks; non-complexed waste; first cycle waste; decontamination waste; and waste water. The waste material is classified as non-complexed and presently has a total waste volume of 33,000 gallons (124,905 L) comprised of 30,000 gallons (113,550 L) sludge and 3,000 gallons (11,355 L) of drainable supernatant liquid. Another source indicates that the 30,000 gallons (11,355 L) of sludge is composed of 14,000 gallons (52,990 L) of sludge and 16,000 gallons (60,560 L) of salt cake. The volume of waste converts to approximately 1 foot (.3 m) in the tank. Based on analytical results from the 1995 Auger sampling event, the waste in the tank does not appear to

present any immediate safety concerns.

Reported Date: May 31, 1996

Site Code: 241-B-151 Classification: Accepted

Site Names: 241-B-151, 241-B-151 Diversion Box **ReClassification:**

Site Type:Diversion BoxStart Date:1945Site Status:InactiveEnd Date:1984

Site Description:

241-B-151 Diversion Box is an underground structure constructed of reinforced concrete with a height of approximately 15 feet (4.6 m). Only an approximate 1 foot (.3 m) of this diversion box appears above grade. The outer dimensions are approximately 20 feet (6.1 m) by 9 feet (2.7 m). Wall thickness ranges from about 2 feet (.61 m) for the lower half to a three step progressively thinner thickness to accommodate the three layers of tapered concrete blocks that make up the cover. The cover is made up in sections consisting of fifteen pre-formed concrete blocks. the layers of concrete blocks are arranged in three stacked rows, the bottom row having the shortest length and the top row having the longest length. The tapered ends aid in locating the blocks into place and each block overlaps with the one above and/or below it. Each block is about 20 inches (51 cm) high and range in length from around 6.8 to 8 feet (2 to 2.4 m)

Waste Type: Process Effluent

Waste Description:

This unit was used for transfer of liquid waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that approximately 50 pounds (23 kilograms) of waste lead is also stored in each diversion box.

Site Code: 241-B-152 Classification: Accepted

Site Names: 241-B-152, 241-B-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1945Site Status:InactiveEnd Date:1984

Site 241-B-152 Diversion Box is an underground structure constructed of reinforced concrete with a **Description:** height of approximately 4.6 meters (15 feet). Approximate 0.3 meters (1 foot) is above grade.

The outer dimensions are approximately (8.5 meters (28 feet) by 2.7 meters (9 feet). Wall thickness is progressively thinner to accommodate for three layers of tapered concrete cover blocks. The layers of concrete blocks are arranged in three stacked rows, the bottom row having

the shortest length and the top row having the longest length.

Waste Type: Process Effluent

Waste Description:

This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that approximately 50 pounds (23 kilograms) of waste lead is stored in each diversion box.

Site Code: 241-B-153 Classification: Accepted

Site Names: 241-B-153, 241-B-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1945Site Status:InactiveEnd Date:1984

Site The 241-B-153 Diversion Box is an underground structure constructed of reinforced concrete

Description: with a height of approximately 10.4 meters (34 feet). Approximate 0.3 meters (1 foot) is above grade. The outer dimensions are approximately 10.4 meters (34 feet) by 2.7 meters (9 feet). The wall thickness gets progressively thinner to accommodate three layers of tapered concrete cover

blocks. The layers of concrete blocks are arranged in three stacked rows.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: Operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-B-201 Classification: Accepted

Site Names: 241-B-201, 241-B-TK-201 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1948

Site Description:

The tanks are marked by yellow riser pipes and the ground surface is covered with gravel. The single-shell tank is constructed of reinforced concrete with a 6.4 millimeter (0.25 inch) steel liner on the bottom and sides and a .48 meters (1.58 foot) thick domed concrete top. The tank has a 6.1 meters (20 foot) diameter and a 7.5 meter (24.9 foot) operating depth. The tank is set on a concrete foundation 11.5 meters (37.9 feet) below grade. Tank capacity is 208,175 liters (55,000 gallons). The tank was covered with approximately 3.3 meters (11 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meters (6-foot) high chain link

Waste Type: Storage Tank

fence.

Waste 224-B building wastes and 221-B metal waste, non-complexed waste, and waste water. The **Description:** waste material is classified as non-complexed and presently has a total waste volume of 109,765

liters (9,000 gallons) comprised of 105,980 liter (28,000 gallons) sludge, 3,785 liters (1,000 gallons) of supernatant, 15,140 liters(4,000 gallons) drainable liquid, and no pumpable liquid remaining. The volume of waste, in 1996, converts to approximately 3.8 meters (12.5 feet)

depth in the tank.

Site Code: 241-B-202 Classification: Accepted

Site Names: 241-B-202, 241-B-TK-202 ReClassification:

Site Type: Single-Shell Tank Start Date: 1951

Site Status: Inactive **End Date:** 1977

Site **Description:** The single-shell tank is the smallest of the tank farm designs with a 6.1 meter (20 foot) diameter, a 7.5 meter (24.9 foot) operating depth, and a 208,175 iters (55,000 gallon) capacity. The tank is constructed of reinforced concrete with a 6.4 millimeter (0.25 inch) steel liner on the bottom and sides and a .48 meter (1.58 foot) thick domed concrete top. The tank is set on a concrete foundation 11.5 meters (37.9 feet) below grade. The tank was covered with approximately 3.3 meters (11 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meters (6-foot) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste **Description:** Wastes consist of: 224 building wastes (lanthanum fluoride), metal waste, non-complexed waste, and B Plant high-level waste. The waste material is classified as non-complexed and presently has a total waste volume of 102,195 liters (27,000 gallons) comprised of 102,195 liters (27,000 gallons) sludge. There is 11,355 liters (3,000 gallons) of drainable liquid remaining. The volume of waste converts to approximately 3.7 meters (12 feet) depth in the

Reported Date: May 31, 1996

241-B-203 **Classification: Site Code:** Accepted

Site Names: 241-B-203, 241-B-TK-203 **ReClassification:**

Site Type: Single-Shell Tank **Start Date:** 1951 **Site Status:** Inactive **End Date:** 1977

Site **Description:** The single-shell tank is the smallest of the tank farm designs with a 20 foot (6.1 m) diameter, a 24.9 foot (7.5 m) operating depth, and a 55,000 gallon (208,175 L) capacity. The tank is constructed of reinforced concrete with a 0.25 inch (6.4 mm) steel liner on the bottom and sides and a 1.58 foot (.48 m) thick domed concrete top. The tank is set on a concrete foundation 37.9 feet (11.5 m) below grade. The tank was covered with approximately 11 feet (3.3 m) of overburden for shielding purposes. At present, the tank farm is enclosed by a 6-foot (1.8 m) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste **Description:** Wastes consist of: 224 building wastes (lanthanum fluoride), metal waste, and non-complexed waste. The waste material is classified as non-complexed and presently has a total waste volume

of 51,000 gallons (193,035 L) comprised of 50,000 gallons (189,250 L) sludge. There is 6,000 gallons (22,710 L) of drainable liquid remaining. The volume of waste converts to

approximately just over 21 feet (6.4 m) depth in the tank.

Reported Date: May 31, 1996

Site Code: 241-B-204 **Classification:** Accepted

241-B-204, 241-B-TK-204 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1951 **Site Status:** Inactive **End Date:** 1977 Site **Description:** The single-shell tank is the smallest of the tank farm designs with a 6.1 meters (20 foot) diameter, a 7.5 meters (24.9 foot) operating depth, and a 208,175 liters (55,000 gallon) capacity. The tank is constructed of reinforced concrete with a 6.4 millimeter (0.25 inch) steel liner on the bottom and sides and a .48 meters (1.58 foot) thick domed concrete top. The tank is set on a concrete foundation 11.5 meters (37.9 feet) below grade. The tank was covered with approximately 3.3 meters (11 feet) of overburden for shielding purposes. At present, the tank farm is enclosed by a 1.8 meter (6-foot) high chain link fence. The tanks are marked by yellow riser pipes and the ground surface is covered with gravel.

Waste Type: Storage Tank

Waste **Description:** Wastes consist of: 224 building wastes (lanthanum fluoride), metal waste, B Plant flushes, and non-complexed waste. The waste material is classified as non-complexed and presently has a total waste volume of 189,250 liters (50,000 gallons) comprised of 185,465 liters (49,000 gallons) sludge. There is 22,710 liters (6,000 gallons) of drainable liquid remaining. The volume of waste converts to approximately 6.4 meters (21 feet) depth in the tank.

Reported Date: May 31, 1996

Site Code: 241-B-252 **Classification:** Accepted

241-B-252, 241-B-252 Diversion Box **ReClassification: Site Names:**

Site Type: Start Date: 1945 Diversion Box **Site Status:** Inactive End Date: 1984

Site **Description:** The site is a 0.6 meter (2 foot) thick, reinforced concrete structure, 4.6 meters (15 feet) deep. The outer dimensions are 11 meters (36 feet) long by 2.7 meters (9 feet) wide. There are twenty four 7.6 centimeter (three inch) Hanford type nozzles housed inside. The top of the box is a concrete cover block which usually extends a few inches above grade.

Waste Type: Process Effluent

Waste **Description:** This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-B-301 **Classification:** Accepted

241-B-301, 241-B-301-B Catch Tank, 241-**Site Names: ReClassification:**

B-301B, IMUST, Inactive Miscellaneous

Underground Storage Tank

Catch Tank **Start Date: Site Type:** 1945 1984 Site Status: Inactive **End Date:**

The site is an underground tank, located within the 241-B Tank Farm chin link fence. The tank is **Description:**

surrounded by a steel chain and marked with radiological and IMUST signs. Four yellow risers

are visible at the surface.

Waste Type: Process Effluent

Waste 1993, the tank was estimated to contain 2230 liters (590 gallons) of supernate and 81648 liters **Description:** (21,600 gallons) of sludge. Analytical data for tank liquid show moderately basic pH with

extremely low levels of fissile materials. Cesium levels are also very low. The radionuclide

analyses have been adjusted for 17.4 year radioactive decay (October 1974 to April 1992). From preliminary observations, supernate in this tank would not be In designated as dangerous waste or prove a criticality hazard.

Site Code: 242-B Classification: Accepted

Site Names: 242-B, 242-B Evaporator ReClassification:

Site Type:EvaporatorStart Date:1951Site Status:InactiveEnd Date:1985

Site Description:

The 242-B Building was used during the Hanford production plant era as a waste tank supernate evaporation facility, a twin to 242-T. Originally, the building consisted of three sections. The north section contained the evaporator vessel (a steam-heated pot evaporator) along with the associated process components. The center section consisted of the control facilities (plutonium laboratory, storage room, change room, office area, and lunch room). Later, the building was a research facility operated by PNL-BNW.

Use of the building as an evaporation facility was terminated in 1962. At that time, Rooms 1 and 2 of 242-B were cleaned up to some extent and the waste evaporation equipment was removed and buried. The 242-BL Building was then constructed (attached to 242-B) as a cask loading facility. A fuel element rupture test loop was installed in Room 2 of 242-B. The buildings were used in a program involving N Reactor fuel elements. The fuel element would be sent to the 327 Building where manmade defects were introduced in the fuel element. It would then be shipped to 242-BL and heated in a rupture loop (located in 242-B) to cause failure. The fuel element would then be returned for examination at the 327 Building. This program was phased out in 1970. The 242-BL Building has not been used since that time. A significant amount of equipment remains in the facility including the hydrostatic pump, heaters, control panels, rupture test loop, and associated piping.

From 1970 through 1980s, the 242-B Building, except Rooms 1 and 2, was used for research on radioactive particles. This work consisted of simulating accidents related to airborne releases of radioactive material using depleted uranium as the particle. A wind tunnel and radioactive aerosol release tanks remain installed in Room 4 of the facility.

The facility remains in a shutdown condition. The following sections describe as of September 1998.

242-B Basin

The basin is 3.1 meter by 2.4 meter by 3.1 meter deep (10 feet by 8 feet by 10 feet deep). It has a full capacity of 22,720 liters (6,000 gallons). In September 1998, the basin was 50% full. The basin was vacuumed in 1972, using the buffalo pump, located in the northwest corner of the building, to pump the sump in the bottom of the basin. The effluent was directed to the floor drain west of the basin, which was connected to tank farms. There are no drains in the basin. Water is contaminated with cesium-137, strontium-90, and miscellaneous fission products from formerly held N-Reactor fuel. Most contamination is believed to be trapped on scale on the walls. There is a hoist and cable above the pool, that are also likely contaminated. Pool water is otherwise fairly clean (past analysis indicate about 93 microcuries per liter of cesium-137) with only dust blown in over the years. Some pool tools are in the basin and are propped up in the corner. The water in the basin was sampled in July 1995 (SAF-S5-071, sample number S5071-01 and R7850).

242-B Hallway

A corridor or hallway connects the B and BL Buildings. Within the hall are remnants of a water purification system plus an empty hydrogenated water tank [2271 liters (600 gallons) - stainless

steel]. Hydrogen gas cylinders external to the building were used to charge the tank. There is a tank inspection port on the top. The tank is not contaminated. Outside the exit door on the west end of the hallway there is a valve handle that was used to open the drain line to the tank farm (to tank 241-B-106).

Room1

Remnants of the old Crud Product Transfer Facility (CPTF) loop (a project supporting C and K Reactors) remain within the room. This was a separate project than the N Reactor fuels project that was done in Room 2. Cobalt-60 used to be stored in casks in this room (storage only). The room contains lots of miscellaneous equipment racks, carts, piping, an old autoclave that stands vertically against the north wall. There is a contaminated sump located next to the west wall that is 0.61 meters by 0.61 meters by 0.76 meters deep (2 feet by 2 feet by 2.5 feet deep). It reads 100 millirads at contact. The sump is dry. The sump serviced a sink and was pumped to a floor drain. It has no drain line in it. Prior to the occupancy of PNL, there was fixed contamination on the floors. Some floors were chipped up and new concrete poured. Other spots were covered with Amercoat paint. The entire room is a potential surface contamination area. On the south side of Room 1, there are remnants of a breathing air compressor and some ventilation ducts.

Room 2

This room is located in the southeast corner of Room1 and is constructed of concrete blocks. The room contained the N Reactor rupture test loop. It is radiologically contaminated and currently contains some fixed piping and a metal filter that has lead brick shielding surrounding it. Some N Reactor steam tubes are lying on the floor behind the shielding. There is a drain in the northwest corner. All building drains on this side of the facility were tied together and went to the tank farm (241-B-106). These are no longer connected. The room may also contain piping to /from a high pressure pump. HEPA filters are in the ceiling of this room.

Room 3

Room 3 is a former storage area that is now empty. The upstairs part of the room contains furniture and empty shelving. Under the hood located next to the south wall, there are sheets of lead shielding covering fixed contamination that was residual after the original evaporator equipment was removed and the floors re-cemented.

Room 4

The room was last used as the Radioactive Aerosol Release Laboratory (RARL). It contains the 3.1 meter (10 foot) diameter process vessel, steel waste tanks, a poly waste tank (all empty), and lots of miscellaneous material, such as hoods, ductwork, HEPA filters, sinks, electrical and instrument controls and miscellaneous equipment from PNL aerosol studies with depleted and natural uranium. Fixed contamination from prior operations (before PNL occupancy) remains. The interior of the tanks is likely contaminated with low levels of uranium. There are no floor drains in this side of the building. There is a sump under the large 3.1 meter (10 foot) diameter tank. Outside the room to the west is the inlet and exhaust ductwork to support the aerosol tests. Possible uranium contamination should be expected. HEPA filters are also in place.

Room 5

Room is the former control room when the building was used as an evaporator. Recently, the room was used for storage. it contains piping with asbestos lagging, some old shelves, and a wooden storage cabinet.

Room 6

Room 6 has a hood that was used by PNL for corrosion studies on unirradiated fuel. The hood is now empty. Under the sink, there are capped off drain lines that likely went to the floor drain system.

Room 7

Room 7 is a former storeroom that is now empty.

Room 8 is a store room that is empty.

Room 9

Room 9 is the former kitchen/lunch room. It is now empty. The sanitary drains from this room and the restroom are out of service. They used to go a crib/drainfield east of the facility.

Room 10

Room 10 is the restroom. it is out of service.

Room 11

Room 11 is an equipment room that contains a water heater. It is out of service.

The building was re-roofed in 1969 and repaired in 1996.

Facility Systems

Potable and fire water are isolated to the facility. Electricity remains in service to provide lights during surveillance and maintenance. The drains to the tank farm are isolated via an isolation valve located at the northeast corner of 242-B. The sanitary sewer line to the septic tank is believed to still be connected. The ventilation system is shut down, and all ventilation discharge points are capped. The ballasts in the fluorescent lights may contain polychlorinated biphenyls (PCBs). The batteries have been removed from the emergency lights.

No accountable property remains in the facility.

Waste Type: Equipment

Waste

Until October 1954, the treatment unit received byproduct cake solution and waste solution from the first decontamination waste cycle. This contained ~10% of original fission product, 1% **Description:**

Plutonium, and the remainder of miscellaneous chemicals. The major chemical component was bismuth phosphate. Over its active life, the unit processed 7,172,000 gallons (27,146,020 L) of

waste.

Waste Type: Soil

Waste

Description:

Soil contamination exists external to the facility, a historical legacy because of diverter box failure from the tank farm operations in the nearby 241-B Tank Farm. Tank 241-B-103

historically would "burp" and contaminate the surroundings. The 207-B basin also was known

to have "upsets' which led to field contamination in the general area.

Site Code: 242-B-151 **Classification:** Accepted

242-B-151, 242-B Evaporator Building **Site Names: ReClassification:**

Diversion Box

Start Date: Site Type: Diversion Box 1945 **Site Status: End Date:** 1984 Inactive

Diversion Box 242-B-151 is constructed of reinforced concrete with a height of approximately 4 Site **Description:** meters (13 feet). Approximate 0.3 meters (1 foot) of the diversion box concrete cover appears

above grade. The outer dimensions are approximately 3.7 meters (12 feet) by 2.4 meters (8 feet). The structure's cover is in sections consisting of three interlocking pre-formed concrete blocks.

Waste Type: Process Effluent

Waste Description:

This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. This unit received byproduct cake solution and waste solution from the first decontamination waste cycle from 242-B. This contained ~10% of original fission product, 1% Plutonium, and the remainder of miscellaneous chemicals. the major chemical component was bismuth phosphate. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-BR-152 Classification: Accepted

Site Names: 241-BR-152, 241-BR-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1984

Tank Farm drawings show 241-BR-152 is co-located in a series of three diversion boxes that are joined together. 241-BXR-152 is the center diversion box. 241-BR-152 Diversion Box is on the

eastern end and 241-BYR-152 is the most western of the diversion boxes in this group. They are

located south of the 241-B-101 tank.

Waste Type: Process Effluent

Waste Description:

This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that approximately 50 pounds (23 kilograms) of lead shielding may stored in each diversion box.

Site Code: 241-BX-101 Classification: Accepted

Site Names: 241-BX-101, 241-BX-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1975

Site Description:

The 22.9 meter (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 m (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeter (12 inches) below the side wall of the tank and a (1.2 m) radius knuckle. The tank has a 16 foot 4.9 meters (4 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-B-101 tank received bismuth phosphate metal waste; evaporator bottoms; B Plant low-level waste, ion exchange waste (waste fractionization), and supernatant containing B Plant low-level waste; PUREX organic wash waste, cladding waste, coating waste, #1 acid and concentrator waste, ion exchange waste; REDOX ion exchange waste from 241-BY, -BX, -B, and -C tanks; tributyl phosphate waste; inorganic wash waste; coating waste; uranium recovery waste; complex waste; double-shell slurry feed; evaporator feed; organic wash waste; metal waste; non-complexed waste; waste water; in-tank solidification saltcake; cesium recovery waste. The unit received an inadvertent transfer of ~ 6,813 liters (1,800 gallons) of ARC-359 organic ion exchange resin in early 1972. The waste material is classified as non-complexed and presently has a total waste volume of 162,755 liters (43,000 gallons) comprised of 158,970 liters (42,000 gallons) sludge and 3,785 liters (1,000 gallons) of drainable supernatant liquid. The volume of waste converts to approximately .3 meters (1 foot) in the tank.

Reported Date: May 31, 1996

Site Code: 241-BX-102 Classification: Accepted

Site Names: 241-BX-102, 241-BX-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1971

Site Description:

The 22.9 meter (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 m (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A threeply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-102 tank received bismuth phosphate metal waste; diatomaceous earth; supernatant containing tributyl phosphate waste; metal waste; PUREX coating waste; B Plant low level waste; evaporator bottoms from 241-BX, -BY, -B, and -C tanks; organic wash waste; metal waste; non-complexed waste. The waste material is classified as non-complexed and presently has a total waste volume of 363,360 liters (96,000 gallons) comprised of 147,615 liters(39,000 gallons) of unknown waste; 64,345 liters (17,000 gallons) of diatomaceous earth; 151,400 liters (40,000 gallons) of sludge; no pumpable liquid remaining, and 15,140 liters (4,000 gallons) of drainable supernatant liquid. The volume of waste converts to approximately .8 meters (2.5

feet) in the tank.

Reported Date: May 31, 1996

Site Code: 241-BX-103 **Classification:** Accepted

241-BX-103, 241-BX-TK-103 **ReClassification: Site Names:**

Start Date: 1948 **Site Type:** Single-Shell Tank **Site Status:** Inactive **End Date:** 1977

Site **Description:** The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and at 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about (11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste **Description:** 241-BX-103 tank received bismuth phosphate metal waste; supernatant containing metal waste; tributyl phosphate waste; PUREX coating waste, #1 acid concentrator waste, ion exchange waste, low and high-level waste, and sludge supernatant wastes; organic wash waste; decontamination waste; PNL waste; N Reactor waste; laboratory waste; evaporator feed, evaporator bottoms; REDOX ion exchange waste; non-complexed waste; waste water; B Plant low-level waste from 241-B, -BX, -BY, -C tanks, BXR-002 diversion box, and ER-311 catch tank. The waste material is classified as non-complexed and presently has a total waste volume of 257,380 liters (68,000 gallons) comprised of 234,670 liters (62,000 gallons) of sludge and 22,710 liters (6,000 gallons) of drainable supernatant liquid. There is no pumpable liquid remaining. The volume of waste converts to approximately .5 meters (1.7 feet) in the tank. Reported Date: May 31, 1996

Site Code: 241-BX-104 **Classification:** Accepted

Site Names: 241-BX-104, 241-BX-TK-104 **ReClassification:**

Site Type: Single-Shell Tank **Start Date:** 1949 **Site Status:** Inactive **End Date:** 1980

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick Site reinforced concrete with a 1 centimeters (0.375 inch) mild carbon steel liner (ASTM A 283 **Description:**

Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing

was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-104 tank received bismuth phosphate metal waste; PUREX coating waste, cladding waste; ion exchange waste (waste fractionization); evaporator bottoms; supernatant containing REDOX high-level waste; complexed and non-complexed waste; double-shell slurry feed; tributyl phosphate waste; water and waste water; cesium recovery waste; in-tank solidification saltcake; B Plant low-level waste, and ion exchange waste from 241-B, -BX, -BY, -C, and -SY tanks, and ER-302-C and ER-311 catch tanks. The waste material is classified as non-complexed and presently has a total waste volume of (374,715 liters (99,000 gallons) comprised of 363,360 liters (96,000 gallons) of sludge and 124,905 liters (33,000 gallons) of drainable supernatant liquid and 102,195 liters (27,000 gallons) of pumpable liquid remaining. The volume of waste converts to approximately .8 meters(2.6 feet) in the tank.

Reported Date: May 31, 1996

Site Code: 241-BX-105 Classification: Accepted

Site Names: 241-BX-105, 241-BX-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1980

Site Description:

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-105 tank received bismuth phosphate metal waste; PUREX coating waste; ion exchange waste; evaporator bottoms; supernatant containing metal waste; uranium recovery waste; B Plant low-level waste; concentrated reduction and oxidation (REDOX) waste; complexed and non-complexed waste; double-shell slurry feed from 241-BX, -BY, -C, -S, and -SX tanks; tributyl phosphate waste; evaporator feed; waste water. The waste material is classified as non-complexed and presently has a total waste volume of 193,035 liters (51,000 gallons) comprised of 162,755 liters (43,000 gallons) of sludge; 11,355 liters (3,000 gallons) of saltcake; 18,925

liters (5,000 gallons) of supernatant liquid. There remains 41,635 liters (11,000 gallons) drainable liquid and 15,140 liters (4,000 gallons) of pumpable liquid remaining. The volume of waste converts to approximately .3 meters (1 foot) in the tank (WHC-EP-0182-98). It should be noted that recent FIC gauge level readings taken from riser 1 of the tank indicate a waste depth of 24.8 inches (.6 m). Core samples recovered from risers 1 and 8 seem to confirm the waste depth and volume indicated by the FIC gauge (WHC-SD-WM-ER-406, Rev. 0B).

Site Code: 241-BX-106 Classification: Accepted

Site Names: 241-BX-106, 241-BX-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1977

Site Description:

The 22.9 m (75 foot) diameter single-shell tank is constructed of .3 meter (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meter (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeter (12 inches) below the side wall of the tank and a (1.2 m) radius knuckle. The tank has a 16 foot 4.9 meters (4 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-106 tank received bismuth phosphate metal waste; PUREX coating waste, ion exchange waste; evaporator bottoms; supernatant containing metal waste; B Plant low-level waste; REDOX ion exchange waste from 241-B, -BX, and -BY tanks; organic wash waste; evaporator feed; non-complexed waste; waste water; tributyl phosphate waste. The waste material is classified as non-complexed and presently has a total waste volume of 143,830 liters (38,000 gallons) comprised of 143,830 liters (38,000 gallons) of sludge. There is no drainable liquid or pumpable liquid remaining. The volume of waste converts to less than .3 meters (1 foot) in the tank.

Site Code: 241-BX-107 Classification: Accepted

Site Names: 241-BX-107, 241-BX-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1977

Description:

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the

tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-107 tank received bismuth phosphate first-cycle waste; metal waste; supernatant containing ion exchange waste from the 241-BX tank farm; evaporator feed; non-complexed waste; uranium recovery waste. The waste material is classified as non-complexed and presently has a total waste volume of 1,302,040 liters (344,000 gallons) comprised of 1,302,040 liters (344,000 gallons) of sludge. There is 113,550 liters (30,000 gallons) drainable liquid and 87,055 liters (23,000 gallons) pumpable liquid remaining. The volume of waste converts to about a 3 meters (10 foot) depth in the tank.

Site Code: 241-BX-108 Classification: Accepted

Site Names: 241-BX-108, 241-BX-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1974

Site Description:

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeters (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-108 tank received bismuth phosphate first-cycle waste; supernatant containing tributyl phosphate waste; PUREX coating waste; B Plant cesium recovery waste; ion exchange waste from 241-BX and -C tanks; non-complexed waste; uranium recovery waste; cladding waste. The waste material is classified as non-complexed and presently has a total waste volume of 98,410 liters (26,000 gallons) comprised of 98,410 liters (26,000 gallons) of sludge. There is 3,785 liters (1,000 gallons) drainable interstitial liquid and no pumpable liquid remaining. The

volume of waste converts to about a 10 centimeters (4 inch) depth in the tank.

Site Code: 241-BX-109 Classification: Accepted

Site Names: 241-BX-109, 241-BX-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1974

Site Description:

reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meter (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with

approximately 2.2 metes (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick

surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-109 tank received bismuth phosphate first-cycle waste; tributyl phosphate waste; PUREX coating waste; cesium recovery waste; ion exchange waste (waste fractionization) and supernatant containing tributyl phosphate waste from 241-BY and -C tanks; non-complexed waste; uranium recovery waste; waste water. The waste material is classified as non-complexed and presently has a total waste volume of 730,505 liters (93,000 gallons) comprised of 730,505 liters (193,000 gallons) of sludge. There is 49,205 liters (13,000 gallons) drainable interstitial liquid and 30,280 liters (8,000 gallons) pumpable liquid remaining. The volume of waste converts to about a 1.7 meters (5.5 foot) depth in the tank.

Site Code: 241-BX-110 Classification: Accepted

Site Names: 241-BX-110, 241-BX-TK-110 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1977

Site

Description: reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a

dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick

was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-110 tank received bismuth phosphate first-cycle waste; evaporator bottoms; supernatant containing coating waste; cesium recovery waste; ion exchange waste (waste fractionization) and B Plant first-cycle waste from 241-B and -C tank farms; non-complexed waste; waste water. The waste material is classified as non-complexed and presently has a total waste volume of 783,495 liters (207,000 gallons) comprised of 738,075 liters (195,000 gallons) sludge, 34,065 liters (9,000 gallons) saltcake, and 11,355 liters (3,000 gallons) supernatant liquid. There is 71,915 liters (19,000 gallons) drainable liquid and 49,205 liters (13,000 gallons) pumpable liquid remaining. The volume of waste converts to about a 1.8 meters (6 foot) depth in the tank.

Site Code: 241-BX-111 Classification: Accepted

Site Names: 241-BX-111, 241-BX-TK-111 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1977

Site Description:

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meters (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-111 tank received bismuth phosphate first-cycle waste; evaporator bottoms; in-tank solidification (ITS-2) bottoms and recycle system; supernatant containing ion exchange waste; coating waste; first-cycle waste from 241-BX tanks; evaporator feed; non-complexed waste. The waste material is classified as non-complexed and presently has a total waste volume of 613,170 liters (162,000 gallons) comprised of 196,820 liters (52,000 gallons) sludge, 412,565 liter (109,000 gallons) saltcake, and 3,785 liter (1,000 gallons) supernatant liquid. There is 11,355 liters (3,000 gallons) drainable liquid and 3,785 liters (1,000 gallons) pumpable liquid remaining. The volume of waste converts to about a 1.4 m (4.5 foot) depth in the tank.

Site Code: 241-BX-112 Classification: Accepted

Site Names: 241-BX-112, 241-BX-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1977

Site Description:

The 22.9 meters (75 foot) diameter single-shell tank is constructed of .3 meters (1 foot) thick reinforced concrete with a 1 centimeter (0.375 inch) mild carbon steel liner (ASTM A 283 Grade C) on the bottom and sides and a .38 meter (1.25 foot) thick domed concrete top. The top of the steel liner is 5.5 meters (18 feet) above the bottom of the tank (at the side wall). The tank has a dished bottom, with a maximum depth of 30 centimeters (12 inches) below the side wall of the tank and a 1.2 meters (4 foot) radius knuckle. The tank has a 4.9 meters (16 foot) operating depth. The tank is set on a reinforced concrete foundation about 11.3 meters (37 feet) below grade. A three-ply cotton fabric waterproofing was applied over the foundation and steel tank. Four coats of primer paint were sprayed on all exposed interior tank surfaces. The tank ceiling dome was covered with three applications of magnesium zincfluorosilicate wash. Lead flashing was used to protect the joint where the steel liner met the concrete dome. Asbestos gaskets were used to seal the manholes in the tank dome. The tank was waterproofed on the sides and top with tar and gunnite. Tank capacity is 2,017,405 liters (533,000 gallons). The tank was covered with approximately 2.2 meters (7.25 feet) of overburden for shielding purposes. At present, the tank farm is surrounded by a chain link fence, topped with three strands of barbed wire. The ground surface is covered with gravel and no vegetation is seen.

Waste Type: Storage Tank

Waste Description:

241-BX-112 tank received first-cycle waste; evaporator bottoms; supernatant containing evaporator bottoms waste; tri-butyl phosphate; ion exchange waste (waste fractionization); first-cycle waste from 241-C tanks: waste water; PUREX coating waste; non-complexed waste. The waste material is classified as non-complexed and presently has a total waste volume of 624,525 liters (165,000 gallons) comprised of 620,740 liters (164,000 gallons) sludge and 3,785 liters(1,000 gallons) supernatant liquid. There is 30,280 liters (8,000 gallons) drainable liquid and 7,570 liters (2,000 gallons) pumpable liquid remaining. The volume of waste converts to about a 1.4 meters (4.5 foot) depth in the tank.

Site Code: 241-BX-153 Classification: Accepted

Site Names: 241-BX-153, 241-BX-153 Diversion Box **ReClassification:**

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1983

Site Diversion Box 241-BX-153 is constructed of reinforced concrete structure built mostly below grade. Only approximate 38 centimeters (15 inches) of this diversion box appears above grade.

The cover blocks are made up in sections consisting of thirty one pre-formed concrete blocks. The layers of concrete blocks are arranged in three stacked rows, the bottom row having the shortest length and the top row having the longest length with 11 total sections. The tapered ends aid in locating the blocks into place and each block overlaps with the one above and/or below it.

Each block is about 51 centimeters (20 inches) high and 1.17 meters (46 inches) wide.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-BX-302A Classification: Accepted

Site Names: 241-BX-302A, 241-BX-302-A Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1948Site Status:InactiveEnd Date:1985

Site The buried tank is located inside the fenced 241-BX-155 Tank Farm. It is covered with gravel and surrounded with post and chain. The tank is marked with radiological and IMUST signs.

Waste Type: Process Effluent

Waste The total tank volume was estimated in 1984 to be 3,160 liters (835 gallons) of sludge with no supernate. The volume of waste converts to a waste level of about 26 cm (10.25 inches) in the

tank. The contents of this tank does not meet the definition of dangerous waste (according to Ecology) and in its present condition, poses no immediate environmental or human safety

hazard, either from a criticality risk or leakage of hazardous waste.

Site Code: 244-BX DCRT Classification: Accepted

Site Names: 244-BX DCRT, 244-BX Double-Contained ReClassification:

Receiver Tank, 244-BX RT, 244-BX Receiver Tank, 244-BX-TK/SMP, 244-BX

Receiver Vault,

Site Type: Receiver Tank Start Date: 1983

Site Status: Active End Date:

Site 244-BX Receiver Tank is a double-contained receiver tank (DCRT) constructed of carbon steel

Description: with a 117,335 liters (31,000 gallons) design capacity. The tank sets lengthwise in a reinforced concrete, steel-lined vault. The lowest portion of the vault is 8.5 m (28 feet) below grade and

houses the tank. The upper portion of the vault is comprised of three sections; the pump pit in the southern section comprises almost half the space. The filter pit is in the middle section and the

instrumentation pit is in the northern section of this part of the vault.

Waste Type: Chemicals

Waste 244-BX Receiver Tank can accept/transport waste from 241-B, 241-BX, & 241-BY Tank

Description: Farms. This tank last received waste from the 241-BY-102 and 241-BY-109 Single-Shell Tanks

during the 1991 Stabilization Campaign. The tank currently contains 17,636 gallons (66,752 L)

of waste. This represents just over one-half of the tank's design capacity.

Site Code: 241-BXR-151 Classification: Accepted

Site Names: 241-BXR-151, 241-BXR-151 Diversion **ReClassification:**

Box

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1984

Site Description:

Diversion Box 241-BXR-151 is an underground structure constructed of concrete.

Approximately 0.3 meters (1 foot) of the diversion box concrete cover appears above grade. The outer dimensions are approximately 14.6 meters (48 feet) by 9.4 meters (30.7 feet). The structure is L shaped from the side view with 4 meters (13 feet) of the north side being 5.1 meters (16.7 feet) high and 5.4 m (17.7 feet) of the southern portion being 2.4 meters (7.75 feet) high. The southern portion of the structure is 2.3 meter (7.5 feet) below grade. The concrete cover is made up in sections consisting of twenty nine interlocking pre-formed concrete blocks. The concrete blocks are about .9 meters (3 feet) wide and range in thickness from .46 meters (1.5 feet) to .61 meters (2 feet). Each cover block is equipped with lifting bails made from steel bar. The blocks were sealed with a combination of hot sealing compound and a flexcell bituminous fiber expansion joint.

Waste Type: Process Effluent

Waste Description:

This unit was used for the transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-BXR-152 Classification: Accepted

Site Names: 241-BXR-152, 241-BXR-152 Diversion **ReClassification:**

Box

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1984

Site 241-BXR-152 is an underground concrete structure. It is co-located in a series of three diversion boxes that are joined together. 241-BXR-152 is the center diversion box. 241-BR-152 Diversion

Box is on the eastern end and 241-BYR-152 is on the west end of the diversion box group. It's

cover blocks and lifting bails are visible from the surface.

Waste Type: Process Effluent

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Description: Volumes were variable according to specific plant operation. It is estimated that approximately

50 pounds (23 kilograms) of lead shielding may be stored in each diversion box.

Site Code: 241-BXR-153 Classification: Accepted

Site Names: 241-BXR-153, 241-BXR-153 Diversion ReClassification:

Box

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1984

Site The 241-BXR-153 Diversion box is co-located with the 241-BYR-153 Diversion Box. 241-BXR-

Description: 153 is on the east side of the 241-BYR-153 Diversion Box. The diversion boxes are underground

concrete structures. Their cover blocks and lifting bails are visible from the surface.

Waste Type: Process Effluent

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Description: Volumes were variable according to specific plant operation. It is estimated that approximately

50 pounds (23 kilograms) of lead shielding may be stored in each diversion box.

Site Code: 244-BXR VAULT Classification: Accepted

Site Names: 244-BXR VAULT, 244-BXR Vault, 244- ReClassification:

BXR Receiving Vault. (Subsites 244-BXR-001, 244-BXR-002, 244-BXR-003, 244-BXR-011), IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Receiving VaultStart Date:1948Site Status:InactiveEnd Date:1985

Site 244-BXR Vault is an underground concrete structure. Only 0.3 meters (1 foot) of the vault concrete cover appears above grade. The vault is surrounded with post and chain and marked with

IMUST signs. The vault houses four tanks of two different sizes in the lower portion of the structure, each within a large concrete chamber. The tanks are numbered BXR-001, BXR-002, BXR-003, and BXR-011 from east to west. Each tank is tied individually to diversion box 241-BXR-151. The concrete cover is made up in sections consisting of twenty-nine interlocking preformed concrete blocks. The concrete blocks are about 1 meter (3.4 feet) wide and just over 2.4

meters (8 feet) long.

Waste Type: Storage Tank

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. The waste volumes in

tanks 244-BXR-001, 244-BXR-002, 244-BXR-003, and 244-BXR-011 are currently unknown. WHC-EP-0560 indicates large volumes of sludge and high cesium-137 concentrations in the 244-BXR vault. In addition, the nitrate and nitrite contents are elevated and could cause this waste to be designated as "dangerous" under the EPA and Ecology criteria. This vault does not

pose a criticality hazard from the levels of fissionable isotopes that were found.

SubSites:

SubSite Code: 244-BXR VAULT:

SubSite Name: 244-BXR-001, 244-BXR-001 Tank and Sump

Classification: Accepted

ReClassification:

Description: Tank 244-BXR-001 is located in an individual cell inside of the 244-BXR Vault. The

concrete cell contains a sump with a capacity of 170 liters (45 gallons). Each cell within the vault is separated from the adjacent cell by a 0.6 meter (2 foot) thick concrete wall. The tank is constructed of 0.64 centimeter (1/4 inch) carbon steel and is 6.1 meters (20 feet) in diameter, 6.1 meters (20 feet) tall, and has a nominal capacity of 189,000 liters (50,000

gallons).

When in service, the tank was used as a slurry accumulation tank receiving a maximum of 51,930 liters (13,720 gallons) per day of metal waste slurry from tanks in the 241-BX and 241-BY Tank Farms. Tank 244-BXR-001 was isolated in 1985 as part of the 244-BXR Vault isolation. The results for samples taken from the tank and sump in 1984 are available in

WHC-SD-EN-ES-040, Rev 0.

SubSite Code: 244-BXR VAULT:

SubSite Name: 244-BXR-002, 244-BXR-002 Tank and Sump

Classification:

Accepted

ReClassification:

Description:

Tank 244-BXR-002 is located in an individual cell inside of the 244-BXR Vault. The concrete cell contains a sump with a capacity of 170 liters (45 gallons). Each cell within the vault is separated from the adjacent cell by a 0.6 meter (2 foot) thick concrete wall. The tank is constructed of 0.64 centimeter (1/4 inch) Type 347 stainless steel and is 4.3 meters (14 feet) in diameter, 3.7 meters (12 feet) tall, and has a nominal capacity of 56,800 liters (15,000 gallons). The tank contains in-tank cooling coils.

When in service, Tank 244-BXR-002 and Tank 244-BXR-003 were configured and used identically. The tanks were used as a pair in waste blending operations. Under normal conditions a slurry stream was brought in from tank 244-BXR-001 and mixed with nitric acid. Tank 244-BXR-002 received a maximum of 53,860 liters (14,230 gallons) per day from tank 244-BXR-001 and a maximum of 29,500 liters (7,800 gallons) per day of nitric acid. The blended solution was then pumped to Tank 244-BXR-011. Tank 244-BXR-002 was isolated in 1985 as part of the 244-BXR Vault isolation. The results for samples taken from the tank and sump in 1984 are available in WHC-SD-EN-ES-040, Rev 0. The sump may contain ferrocyanide discharged from the 241-BXR-151 diversion box.

SubSite Code: 244-BXR VAULT:

SubSite Name: 244-BXR-003, 244-BXR-003 Tank and Sump

Classification: Accepted

ReClassification:

Description:

Tank 244-BXR-003 is located in an individual cell inside of the 244-BXR Vault. The concrete cell contains a sump with a capacity of 170 liters (45 gallons). Each cell within the vault is separated from the adjacent cell by a 0.6 meter (2 foot) thick concrete wall. The tank is constructed of 0.64 centimeter (1/4 inch) Type 347 stainless steel and is 4.3 meters (14 feet) in diameter, 3.7 meters (12 feet) tall, and has a nominal capacity of 56,800 liters (15,000 gallons). The tank contains in-tank cooling coils.

When in service, Tank 244-BXR-002 and Tank 244-BXR-003 were configured and used identically. The tanks were used as a pair in waste blending operations. Under normal conditions a slurry stream was brought in from tank 244-BXR-001 and mixed with nitric acid. Tank 244-BXR-003 received a maximum of 53,860 liters (14,230 gallons) per day from tank 244-BXR-001 and a maximum of 29,500 liters (7,800 gallons) per day of nitric acid. The blended solution was then pumped to Tank 244-BXR-011. Tank 244-BXR-003 was isolated in 1985 as part of the 244-BXR Vault isolation. The results for samples taken from the tank and sump in 1984 are available in WHC-SD-EN-ES-040, Rev 0.

SubSite Code: 244-BXR VAULT:

SubSite Name: 244-BXR-011, 244-BXR-011 Tank and Sump

Classification: Accepted

ReClassification:

Description: Tank 244-BXR-011 is located in an individual cell inside of the 244-BXR Vault. The cell

contains a sump with a capacity of 170 liters (45 gallons). Each cell within the vault is separated from the adjacent cell by a 0.6 meter (2 foot) thick concrete wall. The tank is constructed of 0.64 centimeter (1/4 inch) Type 347 stainless steel and is 6.1 meters (20 feet) in diameter, 6.1 meters (20 feet) tall, and has a nominal capacity of 189,000 liters (50,000

gallons).

When in service, the tank was used as a pump tank for the Uranium Recovery operations. It received approximately 103,000 liters (27,200 gallons) per day of acid solutions from Tanks 244-BXR-002 and 244-BXR-003. The solutions were pumped from 244-BXR-011 to the 241-ER-151 diverter station and from there to U Plant for uranium recovery. Tank 244-BXR-011 was isolated in 1985 as part of the 244-BXR Vault isolation. The results for a tank solids analysis performed in 1978 are available in WHC-SD-EN-ES-040, Rev. 0.

Literature indicates that the wall of the Tank 244-BXR-011 is buckled. Occurrence report 79-70 describes the condition of the tank. The tank failure was due to an overpressure condition on the exterior of the tank from a higher than allowed liquid level in the cell.

Site Code: 241-BY-101 Classification: Accepted

Site Names: 241-BY-101, 241-BY-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1971

Site The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37)

Description: feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating

depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

The tank received bismuth phosphate metal waste and supernatant containing tributyl phosphate waste and evaporator bottoms from 241-BY and -C tank farms. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,465,182 liters (387,000 gallons). Saltcake comprises 1,052,230 liters (278,000 gallons), sludge comprises 412,565 liters (109,000 gallons), and no supernatant. There is no pumpable liquid remaining and 18,925 liters (5,000 gallons) drainable liquid remaining.

Reported Date: April 30, 1996

Site Code: 241-BY-102 Classification: Accepted

Site Names: 241-BY-102, 241-BY-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1977

Site Description:

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meteres (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating

depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

The tank received bismuth phosphate metal waste and supernatant containing tributyl phosphate waste, coating waste; and evaporator bottoms from 241-C, -BX, and -BY tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 277,000 gallons (1,048,445 L). Saltcake comprises the 1,048,445 liters (277,000 gallons) with no sludge or pumpable liquid remaining. There is 41,635 liters (11,000 gallons) of drainable liquid

remaining.

Reported Date: April 30, 1996

Site Code: 241-BY-103 Classification: Accepted

241-BY-103, 241-BY-TK-103 **Site Names:** ReClassification:

Site Type: Single-Shell Tank **Start Date:** 1950 **End Date:** 1973 **Site Status:** Inactive

Site The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37

feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.8 **Description:** meters (45.3 feet) below grade, and the dome is located below grade for shielding purposes. This

type was built to the original design, having a dished bottom but with an increased operating

depth of 7 meters (23 feet).

Waste Type: Storage Tank

Bismuth phosphate metal waste: PUREX coating waste; and supernatant containing evaporator Waste **Description:**

bottoms, cladding waste, tributyl phosphate waste, and PUREX high-level and organic wash wastes from 241-BX, -BY, -C, and -B tanks. Currently contains non-complexed waste with a total waste volume of 1,514,000 liters (400,000 gallons). Saltcake comprises 1,480,200 liters

(391,000 gallons), sludge comprises 34,065 liters (9,000 gallons), and no supernatant.

Pumpable liquid remaining is 518,545 liters 137,000 gallons).

Reported Date: April 30, 1996

Site Code: 241-BY-104 Classification: Accepted

Site Names: 241-BY-104, 241-BY-TK-104 **ReClassification:**

1950 **Site Type:** Single-Shell Tank **Start Date: Site Status:** Inactive **End Date:** 1977

Site **Description:** The unit is a single-shell tank built in 1948. It is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste

Bismuth phosphate metal waste; tributyl phosphate waste; and supernatant containing coating **Description:** waste, tributyl phosphate waste, ion exchange waste, and evaporator bottoms from 241-BY, -

BX, and -C tanks. Tank BY-104 contains metal waste from BX tank farms (1951-4). Received accumulated sludge from other ferrocyanide settling tanks. Coating waste, ion exchange waste, and evaporator bottoms waste was sent to the tank through 1977. Currently contains noncomplexed waste with a total waste volume of 1,385,310 liters (406,000 gallons), sludge comprises 151,400 liters (40,000 gallons), and no supernatant. There is no pumpable liquid remaining and 68,130 lites (18,000 gallons) drainable liquid remaining. This is an ITS-2 unit.

Reported Date: April 30, 1996

Site Code: 241-BY-105 **Classification:** Accepted

241-BY-105, 241-BY-TK-105 **ReClassification: Site Names:**

Single-Shell Tank 1951 **Site Type: Start Date: Site Status:** Inactive 1974 **End Date:**

Site **Description:** The unit is a single-shell tank built in 1948-1949. It is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished

bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste **Description:** Tank BY-105 received metal waste via cascade (1951), U Plant waste from tanks 241-BY-107 and 241-BY-110 (1954) and U Plant waste intermittently until 1966. The tank received wastewater (1957-1974), coating waste (1962-1967), and was an in-tank solidification bottoms receiver (1967). The tank contained evaporator bottoms waste from the in-tank solidification program (1968-1974). Sixty-three tons of Portland cement was added in 1977. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,903,855 liters (503,000 gallons). Saltcake comprised 1,737,315 liters (459,000 gallons), sludge comprises 166,540 liters (44,000 gallons), and no supernatant. There is no pumpable liquid remaining and

726,720 liters (192,000 gallons) drainable liquid remaining.

Reported Date: April 1996

Site Code: 241-BY-106 Classification: Accepted

241-BY-106, 241-BY-TK-106 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1953 **Site Status:** Inactive **End Date:** 1977

Site **Description:** The unit is a single-shell tank built in 1948 which is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 m (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste **Description:** Bismuth phosphate first-cycle waste (1953), in-plant ferrocyanide waste from 1955-7, wastewater (1957-1974), and supernatant containing coating waste (1961-1970). In 1968 the tank began to receive evaporator bottoms from 241-BY and -C tank farms waste. The tank received in-tank solidification bottoms and recycle waste between 1970 and 1976 and evaporator feed from 1976-7. The tank also received tributyl phosphate waste. Presently, the waste material is classified as non-complexed and has a total waste volume of 2,429,970 liters (642,000 gallons). Saltcake comprises 2,070,395 liters (547,000 gallons), sludge comprises 359,575 liters (95,000 gallons), and no supernatant. There is 616,955 liters (163,000 gallons) pumpable liquid remaining and 757,000 liters (200,000 gallons) drainable liquid remaining.

This is an ITS-2 unit.

Reported Date: April 30, 1996

Site Code: 241-BY-107 **Classification:** Accepted

Site Names: 241-BY-107, 241-BY-TK-107 **ReClassification:** **Site Type:** Single-Shell Tank **Start Date:** 1950 **Site Status:** Inactive **End Date:** 1974

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 Site feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 45 **Description:**

feet below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters

(23 feet).

Waste Type: Storage Tank

Waste The tank received tributyl phosphate waste; bismuth phosphate first-cycle waste; and supernatant **Description:** containing tributyl phosphate waste, coating waste, and evaporator bottoms from 241-C, -BX,

> and -T (BY) tank farms. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,006,810 liters (266,000 gallons). Saltcake comprises 779,710 liters (206,000 gallons), sludge comprises 227,100 liters (60,000 gallons), there is 94,625 liters (25,000 gallons) of drainable liquid and no pumpable liquid remaining. This is an ITS-2 unit.

Reported Date: April 30, 1996

Site Code: 241-BY-108 **Classification:** Accepted

241-BY-108, 241-BY-TK-108 **Site Names: ReClassification:**

1951 **Site Type:** Single-Shell Tank **Start Date:** 1972 Inactive **End Date: Site Status:**

The unit is a single-shell tank built in 1948. It is comprised of a carbon steel liner within a Site **Description:**

reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This tank type was built to the original design, having a

dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Initially tank BY-108 received first cycle waste from the tank 241-BY-107 cascade from 1951-**Description:**

1953. The tank received U Plant waste from 1953-1959. The tank received in-plant

ferrocyanide waste from 1954-1957. The tank contained U Plant waste and coating waste from 1959-1968. The tank received evaporator bottoms waste from 1968 to 1973. From 1972-1975, the tank received wastewater. Presently, the waste material is classified as non-complexed and has a total waste volume of 862,980 liters (228,000 gallons). Saltcake comprises 280,090 liters (74,000 gallons), sludge comprises 582,890 liters (154,000 gallons), and no supernatant. There is no pumpable liquid remaining and 34,065 liters (9,000 gallons) drainable liquid remaining.

This is an ITS-2 unit.

Reported Date: April 30, 1996

Site Code: 241-BY-109 **Classification:** Accepted

241-BY-109, 241-BY-TK-109 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1953 1979 **Site Status:** Inactive **End Date:**

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 **Description:**

meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

The tank received supernatant containing tributyl phosphate waste; evaporator bottoms; and PUREX organic wash waste from 241-B, -BX, -BY, and -C tank farms. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,601,055 liters (423,000 gallons). Saltcake comprises 1,286,900 liters (340,000 gallons) and sludge comprises 314,155 liters (83,000 gallons). There is 105,980 liters (28,000 gallons) of drainable and

15,140 liters (4,000 gallons) of pumpable liquid remaining.

Reported Date: April 30, 1996

Site Code: 241-BY-110 Classification: Accepted

Site Names: 241-BY-110, 241-BY-TK-110 ReClassification:

Site Type:Single-Shell TankStart Date:1951Site Status:InactiveEnd Date:1977

Site Description:

The unit is a single-shell tank built in 1948. The unit is comprised of carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

Initially tank 241-BY-110 received first cycle waste in 1951. The tank received

decontamination waste in 1952. The tank contained first cycle supernatant until 1954 when it was pumped to a ditch. The tank received in-plant ferrocyanide waste from 1954-1947. The tank contained U Plant uranium recovery process waste and coating waste from 1957-1958. The tank also received wastewater in 1957. The tank contained coating waste in 1968-1969. From 1969-1976, the tank was used for storage of evaporator bottoms waste. The tank contained concentrated evaporator feed bottoms waste from 1976-1967. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,506,430 liters (398,000 gallons). Saltcake comprises 1,116,575 liters (295,000 gallons), sludge comprises 398,000 liters (103,000 gallons), and no supernatant. There is no pumpable liquid remaining and 34,065

liters (9,000 gallons) drainable liquid remaining.

Reported Date: April 30, 1996

Site Code: 241-BY-111 Classification: Accepted

Site Names: 241-BY-111, 241-BY-TK-111 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1977

Site Description:

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

The tank received bismuth phosphate metal waste; tributyl phosphate; PUREX coating waste; organic wash waste; and supernatant containing evaporator bottoms, tributyl phosphate waste, and organic wash waste from 241-BY and -C tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,737,315 liters (459,000 gallons). Saltcake comprises 1,657,830 liters (438,000 gallons), sludge comprises 79,485 liters (21,000 gallons), there is no drainable liquid or pumpable liquid remaining. Net total of liquids pumped from this

tank is 1,185,462 liters (313,200 gallons).

Reported Date: April 30, 1996

Site Code: 241-BY-112 Classification: Accepted

Site Names: 241-BY-112, 241-BY-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1951Site Status:InactiveEnd Date:1976

Site Description:

The unit is comprised of a carbon steel liner within a reinforced concrete shell, 11.3 meters (37 feet) high, with a capacity of 2,869,030 liters (758,000 gallons). The bottom of the unit is 13.7 meters (45 feet) below grade, and the dome is located below grade for shielding purposes. This type was built to the original design, having a dished bottom but with an increased operating depth of 7 meters (23 feet).

Waste Type: Storage Tank

Waste Description:

The tank received bismuth phosphate metal waste; tributyl phosphate; supernatant containing tributyl phosphate; coating waste, and evaporator bottoms from 241-B, -BX, -BY, and -C tanks. Presently, the waste material is classified as non-complexed and has a total waste volume of 1,010,435 liters (291,000 gallons). Saltcake comprises 1,082,510 liters (286,000 gallons), sludge comprises 18,925 liters 5,000 gallons), there is no pumpable liquid remaining and 8,000 gallons (30,280 L) of drainable liquid remaining.

Reported Date: April 30, 1996

Site Code: 241-BY-ITS1 Classification: Accepted

Site Names: 241-BY-ITS1 ReClassification:

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site

Description:

Site Code: 241-BYR-152 Classification: Accepted

Site Names: 241-BYR-152, 241-BYR-152 Diversion ReClassification:

Box

Site Type:Diversion BoxStart Date:1950Site Status:InactiveEnd Date:1984

Site 241-BYR-152 is co-located in a series of three diversion boxes that are joined together. 241-BXR-Description: 152 is the center diversion box. 241-BR-152 Diversion Box is on the east end and 241-BYR-152 is on the west end of the diversion box group. The diversion boxes are underground cement structures. Their cover blocks and lifting bails are visible from the surface.

Waste Type: Process Effluent

Waste This unit was used for the transfer of waste solutions from processing and decontamination **Description:** Operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-BYR-153 Classification: Accepted

Site Names: 241-BYR-153, 241-BYR-153 Diversion ReClassification:

Box

Site Type:Diversion BoxStart Date:1950Site Status:InactiveEnd Date:1984

Site The diversion boxes are underground concrete structures. Their cover blocks and lifting bails are

Description: visible from the surface. The 241-BYR-153 Diversion box is co-located with the 241-BXR-153

Diversion Box. 241-BYR-153 is on the west side of the 241-BXR-153 Diversion Box.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: Operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-BYR-154 Classification: Accepted

Site Names: 241-BYR-154, 241-BYR-154 Diversion **ReClassification:**

Box

Site Type:Diversion BoxStart Date:1950Site Status:InactiveEnd Date:1984

Site The diversion box is an underground concrete structure. It's cover blocks and lifting bails are

Description: visible from the surface.

Waste Type: Process Effluent

Waste This unit was used for the transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 200-E-59 Classification: Accepted

Site Names: 200-E-59, 241-BY-ITS2-TK-1, 241-BY- ReClassification:

ITS2 Condenser Vessel, IMUST

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1977

Site The above ground components have been removed. This tank was abandoned in place. The tank

Description: is surrounded with a metal fence with IMUST signs.

Waste Type: Equipment

Waste The abandoned tank is considered to be the waste. The current contents of the tank is not known.

Description:

Site Code: 200-E-60 Classification: Accepted

Site Names: 200-E-60, 241-BY-ITS2-TK-2, 241-BY- ReClassification:

ITS2 Heater Flush Tank, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1977

Site The above ground components have been removed and the tank was abandoned in place. The

Description: tank is surrounded with a metal fence with IMUST signs.

Waste Type: Storage Tank

Waste The chemical and radiological contents are not known, but the composition of any residual

Description: material is expected to consist of the same material in the heated waste tank.

Site Code: 200-E-120 Classification: Accepted

Site Names: 200-E-120, Contaminated Soil at 241-B **ReClassification:**

Tank Farm

Site Type:Unplanned ReleaseStart Date:1944Site Status:InactiveEnd Date:1999

Site The site is the soil inside and adjacent to the chain link fence that surrounds the 241-B Tank

Description: Farm. Various radiological postings and warning signs are attached to the chain link fence. The

interior of the tank farm complex is covered with gravel. Many risers and monitoring devises for the underground structures are visible on the surface. The individual unplanned releases associated with the 241-B Tank Farm are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. A posted Contamination Area, marked with steel posts and chain, currently

extends east and south outside the 241-B Tank Farm fence

extends east and south outside the 241-B Tank Farm Tence.

Waste Type: Soil

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne **Description:** contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-4

Site Names: UPR-200-E-4, 241-B-151 Diversion Box Contamination Spread, UN-200-E-4

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-6

Site Names: UPR-200-E-6, UN-200-E-6, Contamination Around the 241-B-153 Diversion Box

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-38

Site Names: UPR-200-E-38, Release from 241-B-152, UN-200-E-38, UN-216-E-4

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-73

Site Names: UPR-200-E-73, UN-216-E-1, 241-B-151 Diversion Box Contamination, UN-200-E-73

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-74

Site Names: UPR-200-E-74, UN-216-E-2, 241-B-152 Diversion Box Contamination, UN-200-E-74

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-75

Site Names: UPR-200-E-75, UN-216-E-3, 241-B-153 Diversion Box Contamination, UN-200-E-75

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-76

Site Names: UPR-200-E-76, UN-216-E-4, 241-B-152 Pipeline Break, UN-200-E-76

Reason: Duplicate Site

Site Code: UPR-200-E-108

Site Names: UPR-200-E-108, 241-B-102 Tank Release, UN-200-E-108

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-109

Site Names: UPR-200-E-109, Release from 241-B-104, UN-200-E-109

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-127

Site Names: UPR-200-E-127, 241-B-107 Leak, UN-200-E-127

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-128

Site Names: UPR-200-E-128, 241-B-110 Leak, UN-200-E-128

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-129

Site Names: UPR-200-E-129, 241-B-201 Leak, UN-200-E-129

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-130

Site Names: UPR-200-E-130, UN-200-E-130, 241-B-203 Leak

Within Boundary Of Larger Site Reason:

Site Code: 200-E-132 Classification: Accepted

Site Names: 200-E-132, 241-BX/BY Tank Farm **ReClassification:**

Contaminated Soil

Unplanned Release **Start Date:** 1948 **Site Type:**

Site Status: Inactive **End Date:**

The site is the soil inside the chain link fence that surrounds the 241-BX/BY Tank Farms. Site

Description: Various radiological postings and warning signs are attached to the chain link fence. The interior

of the tank farm complex is covered with gravel. Many risers and monitoring devises for the underground structures are visible on the surface. The individual unplanned releases associated with the 241-BX/BY Tank Farms are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. A steep slope is located adjacent to the north and northeast sides of the 241-BY Tank Farm. The contaminated slope has been stabilized with cobble and gravel. The slope is considered part

of the tank farm perimeter.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne **Description:**

contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

UPR-200-E-5 Site Code:

Site Names: UPR-200-E-5, UN-200-E-5, 241-BX-102 Tank Overflow

Reason: Within Boundary Of Larger Site

UPR-200-E-105 **Site Code:**

UPR-200-E-105, UN-200-E-105, Liquid Release in the 241-BY Tank Farm **Site Names:**

Reason: Within Boundary Of Larger Site

UPR-200-E-110 Site Code:

Site Names: UPR-200-E-110, 241-BY Valve Pit Release, UN-200-E-110

Within Boundary Of Larger Site Reason:

Site Code: UPR-200-E-116 **Site Names:** UPR-200-E-116, UN-200-E-116, 241-BY-112 Flush Release

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-131

Site Names: UPR-200-E-131, UN-200-E-131, 241-BX-102 Release

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-132

Site Names: UPR-200-E-132, UN-200-E-132, 241-BX-102 Tank Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-133

Site Names: UPR-200-E-133, UN-200-E-133, 241-BX-108 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-134

Site Names: UPR-200-E-134, UN-200-E-134, 241-BY-103 Tank Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-135

Site Names: UPR-200-E-135, UN-200-E-135, 241-BY-108 Tank Leak

Reason: Within Boundary Of Larger Site

Site Code: 2607-EB Classification: Accepted

Site Names: 2607-EB, 241-BY-254 (ITS #2) Sanitary ReClassification:

Septic System

Site Type: Septic Tank Start Date: 1963

Site Status: Inactive End Date:

Site In 1991, the system was marked and roped. A site visit in 1997 (from outside the tank farm

Description: fence) could not identify the location of the system. The unit includes a drain field.

Waste Type: Sanitary Sewage

Waste Sanitary wastewater and sewage. Estimated rate of waste generation is 0.02 cu m/d.

Description:

Site Code: UPR-200-E-4 Classification: Accepted

Site Names: UPR-200-E-4, 241-B-151 Diversion Box ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread, UN-200-E-4

Site Type:Unplanned ReleaseStart Date:1951Site Status:InactiveEnd Date:1952

Site The site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release involved approximately 10 curies of fission products from the 241-B-151 Diversion

Description: Box.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-5 Classification: Accepted

Site Names: UPR-200-E-5, UN-200-E-5, 241-BX-102 ReClassification: Rejected (Consolidation) (6/13/

Tank Overflow

Site Type: Unplanned Release Start Date: 1951

Site Status: Inactive End Date:

Site The fence of the 241-BX Tank Farm is marked with appropriate radiological warning signs. The

Description: release site is not separately marked or posted.

Waste Type: Process Effluent

Waste The waste stream involved with this release was the Bismuth Phosphate process metal waste **Description:** stream. It typically contained approximately 0.5 pound of uranium per gallon of liquid waste.

The waste released contained approximately 20.4 metric tons (22.5 tons) of depleted uranium.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-6 Classification: Accepted

Site Names: UPR-200-E-6, UN-200-E-6, Contamination ReClassification: Rejected (Consolidation) (6/13/

Around the 241-B-153 Diversion Box

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

Site The site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Contamination spread from the 241-B-154 Diversion Box. Contaminated specks surrounded the

Description: work area. The release contained approximately 1 curie of fission products.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-38 Classification: Accepted

Site Names: UPR-200-E-38, Release from 241-B-152, ReClassification: Rejected (Consolidation) (6/13/

UN-200-E-38, UN-216-E-4

Site Type:Unplanned ReleaseStart Date:1968Site Status:InactiveEnd Date:1968

Site 241-B Tank Farm is enclosed with a chain link fence. The release is not separately marked or

Description: posted.

Waste Type: Chemicals

Waste Dose rates ranged from 5 rad per hour to 30 millirem per hour. Ground contamination readings ranged from 2,000 to 6,000 counts per minute. The waste came from the 221-B 9-2 tank and

contained ruthenium and cerium.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-73 Classification: Accepted

Site Names: UPR-200-E-73, UN-216-E-1, 241-B-151 ReClassification: Rejected (Consolidation) (6/13/

Diversion Box Contamination, UN-200-E-

73

Site Type:Unplanned ReleaseStart Date:1951Site Status:InactiveEnd Date:1952

Site The site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 10 curies of contamination was released from the 241-B-151 Diversion Box.

Description:

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-74 Classification: Accepted

Site Names: UPR-200-E-74, UN-216-E-2, 241-B-152 ReClassification: Rejected (Consolidation) (6/13/

Diversion Box Contamination, UN-200-E-

74

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste While working in the 241-B-152 Diversion Box, approximately 1 curie of fission products was

Description: released (particulates).

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-75 Classification: Accepted

Site Names: UPR-200-E-75, UN-216-E-3, 241-B-153 ReClassification: Rejected (Consolidation) (6/13/

Diversion Box Contamination, UN-200-E-

75

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1955

Site The release site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 1 curie of fission products (particulate build up) was released from working in

Description: the 241-B-153 Diversion Box.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-76 Classification: Accepted

Site Names: UPR-200-E-76, UN-216-E-4, 241-B-152 ReClassification: Rejected (Consolidation) (6/13/

Pipeline Break, UN-200-E-76

Site Type:Unplanned ReleaseStart Date:1968Site Status:InactiveEnd Date:1968

Site The site, inside the 241-B Tank Farm, is not separately marked or posted. It is a duplicate of

Description: UPR-200-E-38.

Waste Type: Process Effluent

Waste The release consisted of solution from the 9-2 Tank in B Plant containing cerium-144 with 4,780

Description: curies, ruthenium-106 with 340 curies, and zirconium-95/Nb with 850 curies. This is a fission

product disposal site, high in salt and is neutral to basic pH waste.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Duplicate Site

Site Code: UPR-200-E-105 Classification: Accepted

Site Names: UPR-200-E-105, UN-200-E-105, Liquid ReClassification: Rejected (Consolidation) (6/13/

Release in the 241-BY Tank Farm

Site Type: Unplanned Release Start Date: 1952

Site Status: Inactive End Date:

Site The release site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of first-cycle waste. The exposure rate to the chemical operator trainee

Description: was 7.5 rad per hour about 0.91 meters (3 feet) from the liquid. Estimated dose to the

individual was 60 millirems. Radiation surveys revealed a maximum dose rate of 150 rad per

hour at 5.08 centimeters (2 inches) from the surface of the release.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-108 Classification: Accepted

Site Names: UPR-200-E-108, 241-B-102 Tank Release, ReClassification: Rejected (Consolidation) (6/13/

UN-200-E-108

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site The release is not separately marked or posted from the rest of the tank farm.

Description:

Waste Type: Process Effluent

Waste Metal waste supernatant from 241-B-102 was released to the ground. Visible evidence of ground contamination was noted with dose rates up to 10 rad per hour on the surface.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-109 Classification: Accepted

Site Names: UPR-200-E-109, Release from 241-B-104, ReClassification: Rejected (Consolidation) (6/13/

UN-200-E-109

Site Type: Unplanned Release Start Date: 1953

Site Status: Inactive End Date:

Site The site is not separately marked or posted from the rest of the tank farm.

Description:

Waste Type: Process Effluent

Waste 567.75 liters (150 gallons) of tributyl phosphate waste contaminated the ground at the 241-B-**Description:** 104 Tank. The exposure rate was 18 rad per hour at a distance of 15.24 centimeters (6 inches).

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-110 Classification: Accepted

Site Names: UPR-200-E-110, 241-BY Valve Pit ReClassification: Rejected (Consolidation) (6/13/

Release, UN-200-E-110

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1955

Site The release occurred in the 241-BY Tank Farm. A crescent shaped area around a valve pit was

Description: contaminated. The area is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of first cycle waste from the 241-BY-112 Tank. UPR-200-E-110 covered **Description:** approximately 700 cubic meters (25,000 square feet) of ground around the 112-BY Valve Pit.

Contamination levels up to 22 rad per hour were recorded.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-116 Classification: Accepted

Site Names: UPR-200-E-116, UN-200-E-116, 241-BY- ReClassification: Rejected (Consolidation) (6/13/

112 Flush Release

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site The site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste An unknown amount of caustic flush water containing cesium-137, yttrium-90, and strontium-

Description: 89/90 was released with dose rates up to 3 rad per hour at 15 centimeters (6 inches).

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-127 Classification: Accepted

Site Names: UPR-200-E-127, 241-B-107 Leak, UN-200- ReClassification: Rejected (Consolidation) (6/13/

E-127

Site Type: Unplanned Release Start Date: 1968

Site Status: Inactive End Date:

Site The site is underground, under the 241-B-107 Tank.

Description:

Waste Type: Process Effluent

Waste Approximately 30,300 liters (8,000 gallons) of waste containing 2,000 Curies of cesium-137

Description: leaked from the 241-B-107 Tank.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-128 Classification: Accepted

Site Names: UPR-200-E-128, 241-B-110 Leak, UN-200- ReClassification: Rejected (Consolidation) (6/13/

E-128

Site Type: Unplanned Release Start Date: 1968

Site Status: Inactive End Date:

Site The site is a release underneath the 241-B-110 Tank.

Description:

Waste Type: Process Effluent

Waste 31,500 liters (8,300 gallons) of waste from the 241-B-110 Tank containing 4,300 curies of

Description: cesium-137 leaked from the 241-B-110 tank.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-129 Classification: Accepted

Site Names: UPR-200-E-129, 241-B-201 Leak, UN-200- ReClassification: Rejected (Consolidation) (6/13/

E-129

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site This site is the soil surrounding and beneath the 241-B-201 Tank in the 241-B Tank Farm.

Description:

Waste Type: Process Effluent

Waste Approximately 4,500 liters (1,200 gallons) of waste containing 420 curies of cesium-137 leaked

Description: from the 241-B-201 Tank.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-130 Classification: Accepted

Site Names: UPR-200-E-130, UN-200-E-130, 241-B- ReClassification: Rejected (Consolidation) (6/13/

203 Leak

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1977

Site The release, under the 241-B-203 Tank, is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 1,135 liters (300 gallons) of waste containing lanthanum fluoride leaked from the

Description: 241-B-203 Tank.

The Site Was Consolidated With:

Site Code: 200-E-120

Site Names: 200-E-120, Contaminated Soil at 241-B Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-131 Classification: Accepted

Site Names: UPR-200-E-131, UN-200-E-131, 241-BX- ReClassification: Rejected (Consolidation) (6/13/

102 Release

Site Type: Unplanned Release Start Date: 1971

Site Status: Inactive End Date:

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 266,000 liters (70,000 gallons) of high-level, nonboiling liquid waste from the

Description: 241-BX-102 Tank was released. It contained 51,000 curies of cesium-137.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-132 Classification: Accepted

Site Names: UPR-200-E-132, UN-200-E-132, 241-BX- ReClassification: Rejected (Consolidation) (6/13/

102 Tank Leak

Site Type: Unplanned Release Start Date: 1974

Site Status: Inactive End Date:

Site The area is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste 9,500 liters (2,500 gallons) of waste leaked from the 241-BX-102 Tank.

Description:

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-133 Classification: Accepted

Site Names: UPR-200-E-133, UN-200-E-133, 241-BX- ReClassification: Rejected (Consolidation) (6/13/

108 Leak

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The release is not separately marked or posted.

Description:Waste Type:

Process Effluent

Waste 95,000 liters (2,500 gallons) of waste leaked from the 241-BX-108 Tank containing

Description: approximately 500 curies of cesium-137.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-134 Classification: Accepted

Site Names: UPR-200-E-134, UN-200-E-134, 241-BY- ReClassification: Rejected (Consolidation) (6/13/

103 Tank Leak

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of approximately 19,000 liters (5,000 gallons) of waste from the 241-BY-

Description: 103 Tank containing PUREX coating waste, tributyl phosphate process waste, and organic wash

waste from the 241-BX, 241-BY, 241-B and 241-C tank farms.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-135 Classification: Accepted

Site Names: UPR-200-E-135, UN-200-E-135, 241-BY- ReClassification: Rejected (Consolidation) (6/13/

108 Tank Leak

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of approximately 19,000 liters (5,000 gallons) of tributyl phosphate waste

Description: and evaporator bottoms from 241-BY and 241-C Tank Farms.

The Site Was Consolidated With:

Site Code: 200-E-132

Site Names: 200-E-132, 241-BX/BY Tank Farm Contaminated Soil

Reason: Within Boundary Of Larger Site

200-BP-9

Site Code: HWVP Classification: Discovery

Site Names: HWVP, Hanford Waste Vitrification Plant ReClassification:

(original site)

Site Type:Process Unit/PlantStart Date:Site Status:InactiveEnd Date:

Site This facility was designed to be a test treatment or support facility. The 2704 HV office building,

Description: 2101 HV and the Canister Storage building were constructed, but the proposed vitrification

facility was not completed.

Waste Type: Chemicals

Waste The site was designed to treat 8,000 gallons (30,000 liters) per day of waste, producing 220

Description: pounds (100 kilograms) of glass per hour.

200-BP-11

Site Code: 200 ETF Classification: Accepted

Site Names: 200 ETF, 200 Area Effluent Treatment **ReClassification:**

Facility (ETF), 2025-E

Site Type: Process Unit/Plant Start Date: 1995

Site Status: Active End Date:

Site The Effluent Treatment Facility contains several tanks and process systems that make up the **Description:** primary and secondary treatment trains for the treatment of dilute waste water generated at the

Hanford Facility. The primary treatment train receives waste water in the surge tank, located outside the Effluent Treatment Facility Building on the south side. The secondary treatment train collects, concentrates, dries and packages the waste (generated by the primary treatment train

systems) in lined steel containers.

Waste Type: Process Effluent

Waste The unit treats process condensate containing small amounts of volatile and semivolatile organic

Description: constituents, inorganic constituents and radionuclides.

Site Code: 200-E-17 Classification: Accepted

Site Names: 200-E-17, 200 Area Liquid Effluent ReClassification:

Retention Facility (LERF)

Site Type: Surface Impoundment Start Date: 1994

Site Status: Active End Date:

Site The 200 Area Liquid Effluent Retention Facility (LERF) is comprised of a group of surface

Description: impoundments. The site is surrounded by a fence (about 700 meters by 400 meters). The three

LERF basins are located in the southern portion and are numbered from west to east as 242AL42,

242AL43, and 242AL44, respectively. Each basin is constructed with 2 liners; a leachate collection system; sampling and liquid level risers; and a floating cover. There are three metal

buildings within the fence.

Waste Type: Process Effluent

Waste Process condensate from the evaporator contains small amounts of volatile and semivolatile **Description:** organics; inorganics; and radionuclides. By permit, constituents may include spent halogenated

organies, morganies, and radional decisions. By permit, constituents may merade spent harogen

and non-halogenated solvents and ammonia.

Site Code: 600-156 Classification: Accepted

Site Names: 600-156, Construction Debris Dump Site **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Scattered fragments of plastic are the only remaining debris at this site, which was formerly used

Description: as a construction dump.

Waste Type: Construction Debris

Waste Description:

The waste is construction debris consisting of wood, concrete and piping.

Site Code: 600-214 Classification: Accepted

Site Names: 600-214, 600 Area Purgewater Storage and **ReClassification:**

Treatment Facility, MODU-Tanks, 600-

PSTF

Site Type: Surface Impoundment Start Date: 1990

Site Status: Active End Date:

Site The fenced site is about 210 by 150 meters (680 by 480 feet). Two MODU-tanks (Units #1 and **Description:** #2) are located in the southeast portion of the fenced area. East of the tanks is the truck unloading

area and west of the tanks are two leak detection risers. Near the east fenceline is an 2.4 by 3-meter (8 by 10-foot) metal storage shed. The tanks are polyethylene-lined metal frameworks with floating covers. Each tank has a one million gallon capacity and measures approximately 61 by

61 meters (200 by 200 feet). Unit #1 is south of Unit #2.

Waste Type: Water

Waste Wastes include: purgewater from Hanford Facility groundwater monitoring wells. Liquid resulting from well sampling, well development, and aquifer testing. Waste may also include:

resulting from well sampling, well development, and aquifer testing. Waste may also include nonregulated purgewater from wells. By permit, purgewater may contain radioactive material,

carbon tetrachloride, and other non-specific solvents (F001, F002, F003).

200-CS-1

Site Code: 216-A-29 **Classification:** Accepted

216-A-29, Snow's Canyon, PUREX **ReClassification: Site Names:**

Chemical Sewer (CSL)

Site Type: Ditch **Start Date:** 1955 1991 **Site Status:** Inactive **End Date:**

The ditch was backfilled and surface stabilized in 1991. It is posted as an Underground Site

Description: Radioacitye Material area.

Waste Type: Process Effluent

Waste The unit received waste from 202-A Chemical Sewer, acid fractionator condensate and **Description:** condenser cooling water that flow to 216-B-3 Pond. Until December 1957, the site received

> process cooling water and chemical sewer waste from 202-A. From December 1957 to February 1958, the site received all of the above, but the process cooling water was rerouted to 216-A-25

> Pond. From February 1958 to December 1962, the ditch received the above plus acid fractionator condensate from 202-A. From December 1962 to December 1963, the ditch also received seal cooling water from air sampler vacuum pumps in 202-A. From December 1963 to

January 1966 the vacuum pump cooling water was rerouted to 216-A-35 French Drain.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-51

UPR-200-E-51, Liquid Release from Purex to B-Pond, UN-200-E-51 **Site Names:**

Reason: Within Boundary Of Larger Site

216-B-63 **Site Code: Classification:** Accepted

Site Names: 216-B-63, B Plant Chemical Sewer, 216-B-**ReClassification:**

63 Trench, 216-B-63 Ditch

Site Type: Ditch **Start Date:** 1970 1992 **Site Status:** Inactive **End Date:**

Site The site is a ditch that has been backfilled and surface stabilized. It is posted as an Underground **Description:**

Radioactive Material area and has Danger-Keep Out signs. Prior to stabilization, the ditch had

an earth shielding berm and a side slope of 1.5:1.

Waste Type: Process Effluent

Waste The site has received effluent from the 221-B, 225-B, and 271-B Building floor drains and **Description:** chemical sewer wastes. Waste included corrosive (acidic and caustic) dangerous waste from the

regeneration of demineralizer columns at B Plant. Radiological discharges were considered to be relatively low, with at total of approximately 8.7 curies of beta and 7.6 kilograms (16.7 pounds) of uranium. The unit has not received dangerous waste since September 1985. In 1987, two incidental acid releases occurred. In February 1992, the chemical sewer discharge to the 216-B-63 ditch was eliminated. Effluent was rerouted to 216-B-3 Ponds via underground pipelines. TPA milestone M-17-04B required the elimination of B-Plant Chemical Sewer effluent to the

216-B-63 Ditch by February 1992.

Site Code: 216-S-10D Classification: Accepted

Site Names: 216-S-10D, 216-S-10D Ditch, 202 ReClassification:

Chemical Sump #1 and Ditch, Chemical Sewer Trench, Open Ditch to the Chemical

Sewer Trench, 216-S-10 Ditch

Site Type:DitchStart Date:1951Site Status:InactiveEnd Date:1991

Site The portion of the ditch nearest the 200 West Area perimeter fence is an open, unlined open ditch. Two thirds of the original ditch has been backfilled. The covered portion is posted with

Underground Radioactive Material signs. The open portion is marked, but not radiologically

posted.

Waste Type: Process Effluent

Waste In the past, 420 liters (110 gallons) of hazardous waste salts including sodium nitrite (NaNo2) **Description:** and sodium hydroxide (NaOH) were discharged to the unit. Until 1965, the site received

chemical sewer waste from 202-S and overflow from the high water tower. Since October 1991, the site no longer acted as a ditch because the 216-S-10 Pond was stabilized. No dangerous wastes have been discharged to this unit since February 1987. NOTE: The 216-S-11 Pond was credited with all the liquid effluent inventory for the 216-S-10 Pond and Ditch system for many

years.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-34

Site Names: UPR-200-W-34, Overflow of the 216-S-10 Ditch, UN-200-W-34

Reason: The release was an overflow of the 216-S-10 Ditch and will be remediated with that site.

Site Code: 216-S-10P Classification: Accepted

Site Names: 216-S-10P, 216-S-10P Pond, 202-S ReClassification:

Chemical Sump #1 and Ditch, Chemical

Sewer Trench

Site Type:PondStart Date:1952Site Status:InactiveEnd Date:1984

Site The pond was approximately 5 acres with four finger leader trenches. The unit has been **Description:** backfilled and stabilized and posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste Until 1965, the site received the chemical sewer waste from 202-S and overflow from the high

Description: water tower via the 216-S-10 Ditch. From 1960's, the site received the bearing cooling water

from 202-S. RHO-CD-673 documents two releases of radioactive liquid into the S-10 Disposal System. NOTE: The 216-S-11 Pond was credited with all the liquid effluent inventory for the

216-S-10 Pond and Ditch system for many years.

Site Code: 216-S-11 Classification: Accepted

216-S-11, 202-S Chemical Sump #2, **Site Names:**

Chemical Sewer Trenches, 216-S-11

Swamp

Site Type: Start Date: 1954 Pond 1965 **Site Status:** Inactive **End Date:**

A 1999 site visit found the area to be flat and covered with bunch grass. Neither of the 216-S-11 Site

ReClassification:

pond lobes are marked or posted. **Description:**

Process Effluent Waste Type:

Waste The site received the waste from air conditioning and drains in 202-S Building and the chemical **Description:** sewer waste from the 202-S Building. NOTE: The 216-S-11 Pond was credited with all the

liquid effluent inventory for the 216-S-10 Pond and Ditch system for many years.

Site Code: 200-W-24 **Classification:** Rejected (4/26/2000)

200-W-24, 216-S-10 Borrow Pit, S-10 **ReClassification: Site Names:**

Pond Borrow Area

Start Date: 1984 **Site Type:** Depression/Pit (nonspecific)

End Date: **Site Status:** Inactive

Site The site is an unmarked, large, scraped sandy area near the southwest corner of 200 West Area. **Description:**

Its surface is mostly level with the surrounding area, except for a cut-away hill on the west edge of

the borrow pit. The site has mostly revegetated with crested wheatgrass.

Site Code: UPR-200-W-34 **Classification:** Accepted

UPR-200-W-34, Overflow of the 216-S-10 **ReClassification:** Rejected (1/19/2000) **Site Names:**

Ditch, UN-200-W-34

Start Date: 1955 **Site Type:** Unplanned Release

End Date: Site Status: Inactive

The site is an unplanned release resulting from an overflow of the 216-S-10 Ditch. The site is Site

Description: described as 0.4 hectare (1 acre) large, located between the open 216-S-10 Ditch and the REDOX

Chemical Sewer Trenches (aka 216-S-11). The release area is not separately marked or posted.

The site has been consolidated with the 216-S-10 Ditch.

Waste Type: Process Effluent

The process that the waste originated from, and the quantity of the overflow was not described in Waste **Description:** the original reference. The maximum dose rate detected was 1 rad/hour at the ground surface.

The Site Was Consolidated With:

Site Code: 216-S-10D

216-S-10D, 216-S-10D Ditch, 202 Chemical Sump #1 and Ditch, Chemical Sewer Trench, Open **Site Names:**

Ditch to the Chemical Sewer Trench. 216-S-10 Ditch

Reason: The release was an overflow of the 216-S-10 Ditch and will be remediated with that site.

200-CW-1

Site Code: 216-A-9 Classification: Accepted

Site Names: 216-A-9, 216-A-9 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1969

Site The crib is a surface stabilized area, marked with light post and chain. It is posted as an

Description: Underground Radioactive Material area.

Waste Type: Process Effluent

Waste Until February 1958, the site received the acid fractionator condensate and the condenser cooling water from the 202-A Building. From February 1958 to April 1966, the site was

inactive. From April 1966 to October 1966, the site received N Reactor decontamination waste via a manhole at the site. From October 1966 to August 1969, the site was inactive. In August 1969, the site received the acid fractionator condensate from the 202-A Building. The waste is

acidic.

Site Code: 216-A-25 Classification: Accepted

Site Names: 216-A-25, Gable Mountain Swamp, 216-A- ReClassification:

25 Swamp, Gable Mountain Pond

Site Type:PondStart Date:1957Site Status:InactiveEnd Date:1987

Site The site was a large, water-filled pond that received cooling water from the Plutonium Uranium Description: Extraction (PUREX) and B-Plant operations. The pond had a total surface area of 32 hectares (

Extraction (PUREX) and B-Plant operations. The pond had a total surface area of 32 hectares (82 acres), 28 hectares (71 acres) in the main pond and a 4.4-hectare (11-acre) overflow pond. The average depth of the unit was 1.5 meters (5 feet), with a maximum depth of 3 meters (9 feet). The pond has been backfilled and surface stabilized. The backfilled pond is delineated with concrete markers and posted as Underground Radioactive Material. An additional area of soil

contamination was identified in 1996, north of the west end of the overflow pond. This area was given the Waste Information Data System (WIDS) Site Code number 600-118. In 1997, the area was surface stabilized and reposted as Underground Radioactive Material, adding 3.3 hectares

(8.2 acres) to the total radiologically posted area.

Waste Type: Water

Waste Until May 1958, the unit received the process cooling water from 202-A Building (Plutonium Description: Uranium Extraction [PUREX] Plant). From May 1958 to 1960, the unit received the above plus

cooling water from the contact condenser in the 241-A-431 Building. In 1960, the unit received the above plus the surface condensator cooling water in the 241-A-401 Building (A Tank Farm). From November 1967 to January 1968, the unit received the above plus the wastewater from the 284-E Powerhouse. From January 1968 to March 1969, the unit received the above plus the cooling water and steam condensate from the 244-AR Vault. In March 1969, the pipeline to the contact condenser cooling system from the 241-A-431 Building Vault was valved out. After March 1977, the unit received the above plus the 242-A Evaporator steam condensate cooling water. (RHO-CD-798 shows a valve at the east end of the 216-B-2-3 Ditch connecting to PUREX Cooling Water Line to Gable Pond. The graphic is labeled "Effluent Pipelines and Transfer Capabilities for Gable Mountain and B Ponds". The B-Plant Aggregate Area

Management Study Report [AAMSR] does not list B-Plant as a contributor to the Gable Pond

inventory. However, WHC-SD-DD-TI-036 states that Gable Pond later served B-Plant.

The Following Sites Were Consolidated With This Site:

Site Code: 600-118

Site Names: 600-118, Hot Spot Northwest of Gable Mountain Pond, Contaminated Soil Northwest of Gable

Mountain Pond

Reason: This site is an overflow from Gable Mountain Pond.

Site Code: 216-A-40 Classification: Accepted

Site Names: 216-A-40 Retention Basin, 216-A-39 Crib, **ReClassification:**

216-A-39 Trench

Site Type:Retention BasinStart Date:1968Site Status:InactiveEnd Date:1979

Site The site is currently a surface stabilized area that is posted Underground Radioactive Material.

Description: The corners are marked with concrete AC-540 markers.

Waste Type: Steam Condensate

Waste The site received and stored in rubber bladders, the diverted cooling water and steam condensate

Description: from the 244-AR Vault.

Site Code: 216-A-42 Classification: Accepted

Site Names: 216-A-42, 207-AA Retention Basin, 216-A- ReClassification:

42 Trench, 216-A-42 Retention Basin

Site Type:Retention BasinStart Date:1978Site Status:InactiveEnd Date:1997

Site The site is surrounded with steel posts and chain. It is posted with Underground Radioactive **Description:** Material signs. Concrete cover blocks are visible on the top of the basin. The chain link fence

has been removed.

The site consists of a rubber-lined trench divided into three holding basins by two internal berms. One end of the trench features the inlet structure for the 91-centimeter (36-inch) diameter cooling water line while the other end has the inlet structure for the 20.3-centimeter (8-inch) diameter steam condensate pipeline. Both lines enter at 2.9 meters (9.5 feet) below grade. Outlet drains are located at the low-points in each basin and connect to the 216-A-42A Pump Station. The capacity of the three basins is in excess of 6.1E+06 liters (1.6E+06 gallon). The trench is equipped with a float. Concrete cover blocks were installed over the basins in 1984.

Waste Type: Process Effluent

Waste The unit received chemically or radioactively contaminated diversions from the PUREX

Description: chemical sewer line, cooling water line, and steam condensate lines. Depending upon the treatment required for the contaminant, the waste was released from the unit to the 216-A-30,

216-A-37-1 and 216-A-37-2 Cribs, to PUREX process piping, or to the Tank Farms.

Site Code: 207-B **Classification:** Accepted

207-B, B Plant Retention Basin, 207-B **ReClassification: Site Names:**

Retention Basin

Retention Basin **Start Date:** 1945 **Site Type:** 1997 **Site Status:** Inactive **End Date:**

Site The unit is a concrete-lined basin, divided into two equal sized sections. The basin is surrounded

Description: by a 2.4 meter (8 foot) chain link fence and posted with Contamination Area signs.

Waste Type: Water

Waste The unit received process cooling water from process equipment jackets in the 221-B Building. Normally, activity levels were low, and the water was discharged to the 216-B-3 Pond via the **Description:**

216-B-2-1, 216-B-2-2, 216-B-2-3 and 216-B-3-1, 216-B-3-2 and 216-B-3-3 ditches.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-32

Site Names: UPR-200-E-32, UN-200-E-32, Coil Leak from 221-B

Within Boundary Of Larger Site Reason:

Site Code: 216-B-2-1 **Classification:** Accepted

Site Names: 216-B-2-1, 216-B-1, B Swamp Ditch, 216-**ReClassification:**

B-2, B Ditch

Site Type: Ditch **Start Date:** 1945 **Site Status:** 1963 Inactive **End Date:**

The ditch has been backfilled and surface stabilized. It is located within a larger Underground Site

Description: Radioactive Material area that includes the 216-B-2-1, 216-B-2-2 and 216-B-2-3 stabilized

ditches.

Process Effluent **Waste Type:**

Waste Until March 1952, the site transported steam condensate, process cooling water, and chemical **Description:**

sewer from 221-B waste and water from the 284-E Powerhouse toward 216-B-3 Pond. After

March 1952, the site transported the streams identified above in addition to the 241-CR Vault

cooling water.

Site Code: 216-B-2-2 **Classification:** Accepted

Site Names: 216-B-2-2, 216-B-2-2W, 216-B-1 Ditch **ReClassification:**

Start Date: 1963 **Site Type:** Ditch **End Date:** 1970 **Site Status:** Inactive

The ditch has been backfilled and surface stabilized. It is located within a large Underground Site Radioactive Material area that includes the 216-B-2-1, 216-B-2-2 and 216-B-2-3 backfilled **Description:**

ditches. The individual ditches are not marked. The head end of the ditch is located near the 207-B Retention Basin. The lower end terminated near the northeast corner of the 218-E-12A Burial

Ground.

Waste Type: Process Effluent

Waste Until January 1965, the site transported and percolated the 284-E Powerhouse waste, 241-CR **Description:** Vault cooling water, 221-B cooling water and steam condensate (replacing 216-B-2-1), and

chemical sewer toward 216-B-3 Pond. From January 1965 to November 1967, the same effluents as those listed above in addition to 241-BY Tank Farm In Tank Solidification (ITS) Unit 1 cooling water were transported and percolated by the ditch. From November 1967 to February 1968, the same effluents as those listed above minus 284-E Powerhouse waste and steam condensate were released to the ditch. From February 1968 to April 1970, the same effluents as those listed above plus the 241-BY Tank Farm ITS Unit 2 were released to the ditch. An Unplanned Release on March 22, 1970 released approximately 1000 curies of

strontium-90. After April 1970, the site received cleanup waste from 207-B Retention Basin.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-138

Site Names: UPR-200-E-138, Liquid release from B-Plant, UN-200-E-138, UPR-200-W-66

Reason: Within Boundary Of Larger Site

Site Code: 216-B-2-3 Classification: Accepted

Site Names: 216-B-2-3, B Pond Ditch, B Swamp Ditch, **ReClassification:**

216-B-2-2E

Site Type:DitchStart Date:1970Site Status:InactiveEnd Date:1987

Site The ditch is currently backfilled and surface stabilized. It is located inside a large Underground

Description: Radioactive Material area that includes the 216-B-2-1, 216-B-2-2 and 216-B-2-3 ditches

Waste Type: Process Effluent

Waste From April 1970 to July 1973, the site transported and percolated the 241-CR Vault cooling **Description:** water, 221-B Plant cooling water, and condenser cooling water from 241-BY Tank Farm ITS (In

Tank Solidification) Units 1 and 2. The waste flowed into the 216-B-3 Pond. After July 1973, the ditch received the above-listed effluents except from 241-BY Tank Farm ITS Units 1 and 2.

Site Code: 216-B-3 Classification: Accepted

Site Names: 216-B-3, B Pond, B-3 Pond, 216-B-3 Main ReClassification:

Pond, B Swamp, 216-B-3 Swamp, B Plant

Swamp

Site Type:PondStart Date:1945Site Status:InactiveEnd Date:1994

Site The 216-B-3 Pond has been backfilled and surface stabilized. It is marked and posted with **Description:** Underground Radioactive Material Area signs. The main pond was roughly rectangular, with a

surface area of 14 hectares (35 acres). The pond was expanded to include three additional lobes, 216-B-3A, 216-B-3B, and 216-B-3C, with areas of 4 hectares (10 acres), 4 hectares (10 acres), and 17 hectares (41 acres), respectively. The three expansion lobes are considered three separate waste sites. Collectively, the expansion ponds are also a separate RCRA treatment, storage and

disposal (TSD) unit.

Waste Type: Process Effluent

Waste Description:

Waste streams flowed from the 216-A-29 and 216-B-3-3 Ditches into the 216-B-3 Pond. Discharges to 216-B-3 via 216-B-3-3 included: 221-B Building steam condensate and process cooling water; 284-E Powerhouse water; 244-CR Vault cooling water; 244-AR Vault and 242-A Evaporator cooling water; 202-A process cooling water, condenser cooling water, and air sampler vacuum pumps seal cooling water; 241-BY Tank Farm condenser cooling water; and Waste Encapsulation Storage Facility cooling water. Discharges to 216-B-3 via 216-A-29 included 202-A chemical sewer and acid fractionator condensate. The main pond received corrosive and toxic dangerous waste from two primary sources: the regeneration of the Plutonium Uranium Extraction (PUREX) plant demineralizer columns and from spills of dangerous or mixed waste from PUREX. The spills included hydrazine, cadmium nitrate, and ammonium flouride/ ammonium nitrate. The backwash from the regeneration of the demineralizer columns included nitric acid, sulphuric acid, sodium hydroxide, and potassium hydroxide.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-34

Site Names: UPR-200-E-34, Liquid Release to B-Pond and Gable Pond, UN-200-E-34

Reason: Within Boundary Of Larger Site

Site Code: 216-B-3-1 Classification: Accepted

Site Names: 216-B-3-1, B Swamp Ditch, 216-B-2, 216- ReClassification:

B-3 Ditch

Site Type:DitchStart Date:1945Site Status:InactiveEnd Date:1964

The head end is located outside the 200 East perimeter fence, east of 218-E12A Burial Ground.

Description: The ditch continue due east to the 216-B-3 Pond. It widened into a swamp before entering the

216-B-3 Pond. The site is currently backfilled and surface stabilized. It is located within a large posted Underground Radioactive Material area that also includes the 216-B-3-2 and 216-B-3-3

backfilled ditches.

Waste Type: Process Effluent

Waste Until March 1962, the site percolated and transported 221-B Plant steam condensate, process cooling water, chemical sewer waste, and 284-E Powerhouse waste. From March 1952 to

cooling water, chemical sewer waste, and 284-E Powerhouse waste. From March 1952 to November 1955, the site percolated and transported the above-listed streams plus 241-CR Vault cooling water. From November 1955 to December 1957, the site percolated and transported the above-listed streams plus effluent from 216-A-29 Ditch. Wastes include 202-A process cooling water and chemical sewer waste. From December 1957 to February 1958, the site percolated and transported the above-listed streams minus 202-A process cooling water. From February 1958 to December 1962, the site percolated and transported the above-listed streams plus 202-A Acid Fractionater condensate. From December 1962 to December 1963, the site percolated and transported the above-listed streams plus 202-A seal cooling water from air sampler vacuum pumps. After December 1963, the site percolated and transported the above-listed streams

minus 202-A seal cooling water.

Site Code: 216-B-3-2 Classification: Accepted

Site Names: 216-B-3-2, 216-B Ditch, 216-B-1 Ditch, B ReClassification:

Swamp Ditch, 216-B-2-2E

Site Type:DitchStart Date:1964Site Status:InactiveEnd Date:1970

Site The ditch has been backfilled and surface stabilized. It is located within a large Underground Pescription: Radioactive Material Area that includes the 216-B-3-1, 216-B-3-2 and 216-B-3-3 covered

ditches. The unit was open from the diverter station to the 216-B-3 Pond and was approximately 1.2 to 2.4 meters (4 to 8 feet) deep. It was backfilled in July 1970 after a release of strontium-90

from 221-B Plant.

Waste Type: Process Effluent

Waste Until January 1965, the site transported 221-B Plant process cooling water, steam condensate, and chemical sewer; 241-CR Vault cooling water; 284-E Powerhouse water; and received and

transported 202-A chemical sewer waste and fractionator condensate from 216-A-29 Ditch. From January 1965 to January 1966, the site transported the above mentioned streams plus 241-TY Tank Farm ITS Unit 1 condenser cooling water. From January 1966 to November 1967, the site transported the above mentioned streams plus condenser cooling water and air sampler vacuum pump seal cooling water from 202-A Building. From November 1967 to February 1968, the site transported the above mentioned streams minus 284-E Powerhouse wastewater. After February 1968, the site transported the above mentioned streams plus 241-BY Tank Farm

ITS Unit 2 condenser cooling water.

Site Code: 216-B-3-3 Classification: Accepted

Site Names: 216-B-3-3, B Swamp Ditch, 216-B-3-3 **ReClassification:**

Ditch

Site Type:DitchStart Date:1970Site Status:InactiveEnd Date:1994

Site The ditch has been backfilled and surface stabilized. It is posted as an Underground Radioactive

Description: Material area.

Waste Type: Process Effluent

Waste Until July 1973, the site transported and percolated 221-B cooling water, 202-A chemical sewer **Description:** from the 216-A-29 Ditch, 241-BY Tank Farm ITS Units 1 and 2 cooling water, and 244-CR

Vault cooling water. From July 1973 to May 1978, the site received the same as above minus

ITS Units 1 and 2 cooling water. From May 19/78, the site received 221-B cooling water and

202-A chemical sewer from the 216-A-29 Ditch.

Site Code: 216-B-3A Classification: Accepted

Site Names: 216-B-3A, B Pond Lobe A, B Pond First ReClassification: Closed Out (6/27/1995)

Expansion Lobe

Site Type:PondStart Date:1983Site Status:InactiveEnd Date:1994

Site The site is a pond that was used for overflow from 216-B-3. The unit is roughly rectangular with

Description: approximately 4.5 hectares (11 acres) of surface area. It is inactive and dry. It was sampled and released from radiological controls with the exception of the percolation trench that is posted as a

Soil Contamination Area.

Waste Type: Process Effluent

Waste The site received overflow from the 216-B-3 Main Pond. Potential sources include 221-B steam Description: condensate and process cooling water, 284-E Powerhouse water, 244-CR, 244-AR and 242-A

cooling water, 202-A process, condenser, and air sampler vacuum pump cooling water, 202-A

chemical sewer, fractionator condensate, and WESF cooling water.

Site Code: 216-B-3A RAD Classification: Accepted

Site Names: 216-B-3A RAD, 216-B-3A Expansion ReClassification:

Lobe Residual Radioactive Waste, 216-B-3

1st Overflow Pond

Site Type:PondStart Date:1983Site Status:InactiveEnd Date:1984

Site This site is the residual radioactive contamination that remains in the 216-B-3A Pond. The site **Description:** was closed out as a RCRA Treatment, Storage and Disposal Unit following cleanup of chemical

was closed out as a RCRA Treatment, Storage and Disposal Unit following cleanup of chemical contamination. The unit is roughly rectangular with approximately 4.5 hectares (11acres) of surface area. It is inactive and dry. It was sampled and released from radiological controls with the exception of the percolation trench that is posted as a Soil Contamination Area. The pond was approximately 5.5 meters (18 feet) lower than the 216-B-3 Main Pond elevation. 8-millimeter (0.3-inch) plastic was placed along the slope of the pond banks and covered with

gravel.

Waste Type: Process Effluent

Waste 216-B-3A received overflow from the 216-B-3 Main Pond. Potential sources include 221-B

Description: steam condensate and process cooling water, 284-E Powerhouse water, 244-CR, 244-AR and

242-A cooling water, 202-A process, condenser, and air sampler vacuum pump cooling water,

202-A chemical sewer, fractionator condensate, and WESF cooling water.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-14

Site Names: UPR-200-E-14, UN-200-E-14, 216-B-3 Pond Dike Break

Reason: Within Boundary Of Larger Site

Site Code: 216-B-3B Classification: Accepted

Site Names: 216-B-3B, B Pond Lobe B, B Pond Second ReClassification: Closed Out (6/27/1995)

Expansion Lobe

Site Type:PondStart Date:1983Site Status:InactiveEnd Date:1995

Site The unit is roughly rectangular with approximately 4.4 hectares (11 acres) of surface area. It is

Description: dry with a small radiological area in the northwest corner. The 216-3A, 3B and 3C Expansion

ponds make up a separate RCRA TSD Unit.

Waste Type: Process Effluent

Waste Description:

The 216-B-3A and 3B Expansion Lobes were constructed in 1983 to receive increased discharges from the 216-B-3 Main Pond due to the increased water volume from the restart of the PUREX Plant. A dike between the 216-B-3A and 3B ponds failed in January of 1984. The discharge from the failed dike was contained with the 216-B-3B lobe. Prior to the dike failure the 216-B-3B lobe had never received any effluent. In response to the incident, the 3A and 3B lobes were isolated and trenches were dug in the bottoms of the expansion ponds to increase infiltration rates. The 216-B-3B lobe was taken out of service in May of 1985. It remained potentially active until it was clean closed in June of 1995.

Site Code: 216-B-3B RAD Classification: Accepted

Site Names: 216-B-3B RAD, 216-B-3B Expansion **ReClassification:**

Lobe Residual Radioactive Waste

Site Type: Pond Start Date: 1984
Site Status: Inactive End Date: 1985

Site The unit is roughly rectangular with approximately 4.4 hectares (11 acres) of surface area. It is

Description: dry with a small radiologically posted area (Surface Contamination) in the northwest corner of the

pond. The 216-3A, 3B and 3C Expansion ponds make up a separate RCRA TSD Unit.

Waste Type: Process Effluent

Waste With the exception of the 216-B-3A dike failure incident, the 216-B-3B Pond Lobe was never

Description: used.

Site Code: 216-B-3C Classification: Accepted

Site Names: 216-B-3C, B Pond Lobe C, B Pond Third ReClassification: Closed Out (6/27/1995)

Expansion Lobe

Site Type:PondStart Date:1985Site Status:InactiveEnd Date:1997

Site The unit is a rectangular shaped pond with approximately 17 hectares (41 acres) of surface area.

Description: It was excavated into a very coarse gravel layer with a very high percolation rate. It contained

eight parallel trenches that ran in a north-south direction, extending the entire length of the pond. An area on the east side of the pond has been backfilled and surface stabilized. It is posted as an

Underground Radioactive Material Area. The remainder of the pond is posted as a

Contamination Area.

Waste Type: Process Effluent

Waste The site received non-RCRA regulated waste water consisting of steam condensate and cooling

Description: water.

Site Code: 216-B-3C RAD Classification: Accepted

Site Names: 216-B-3C RAD, 216-B-3C Expansion **ReClassification:**

Lobe Residual Radioactive Waste

Site Type:PondStart Date:1985Site Status:InactiveEnd Date:1997

Site The unit is rectangular pond with approximately 17 hectares (41 acres) of surface area. It was

Description: excavated into a very coarse gravel layer with a very high percolation rate. The pond was

constructed with eight parallel north-south trenches and one east-west trench at the spillway.

Waste Type: Process Effluent

Waste The 216-B-3C received effluent from the 216-B-3A Overflow Pond from 1985 to 1994. In

Description: 1994, the effluent from the 216-B-3-3 Ditch was routed directly to the 216-B-3C. Effluent included water from the 200 East Powerhouse Ditch. The flow to 216-B-3C was permanently

isolated on August 18, 1997.

Site Code: 216-B-59 Classification: Accepted

Site Names: 216-B-59, 216-B-58 Trench, 216-B-58 ReClassification:

Ditch

Site Type:TrenchStart Date:1967Site Status:InactiveEnd Date:1974

Site The original 216-B-59 was an unlined trench. The site was upgraded to a retention basin in 1974

Description: (see 216-B-59B). The lined retention basin was constructed over top of the unlined 216-B-59 trench. There are currently no visual features remaining of the unlined trench. The concrete-lined

basin is enclosed by a 2 meter (6 foot) chain link fence

Waste Type: Process Effluent

Waste The unlined trench received diverted cooling water from the 221-B Building. Only one

Description: diversion occurred (3/68) before the unit was lined and renamed the 216-B-59B Retention Basin.

Site Code: 216-B-59B Classification: Accepted

Site Names: 216-B-59B, 216-B-59 Retention Basin **ReClassification:**

Site Type:Retention BasinStart Date:1974Site Status:InactiveEnd Date:1997

Site The site is a concrete structure enclosed by a six foot (2 meter) chain link fence.

Description:

Waste Type: Process Effluent

Waste This unit received contaminated cooling water from the 221-B Building. The diverted effluent

Description: was pumped back into 221-B for reprocessing.

Site Code: 216-C-9 Classification: Accepted

Site Names: 216-C-9, 216-C-7 Swamp, Former 221-C ReClassification:

Canyon Excavation, 216-C-9 Swamp, Semi-

Works Swamp, 216-C-9 C Canyon Excavation Semiworks Swamp

Site Type:PondStart Date:1953Site Status:InactiveEnd Date:1985

Site The entire site is currently backfilled and surface stabilized. It is posted as an Underground

Description: Radioactive Material area. The solid waste burial portion of the site is not separately marked or

posted from the liquid waste portion of the site.

Waste Type: Water

Waste Until August 1960, the site received process cooling water from the 201-C Building; 201-C, 215-**Description:** C, 271-C, and 276-C Building floor drains; and miscellaneous water from the 209-E Building

and the Hot Semiworks facilities. From August 1960 to October 1969, the site received the same effluents as above plus miscellaneous wastewater from the 209-E Building. From October 1969 to December 1985, the site received miscellaneous wastewater from the Hot Semiworks

facilities and the 209-E Building.

Site Code: 200-E PD Classification: Accepted

Site Names: 200-E PD 200-E Powerhouse Ditch, 200 **ReClassification:**

East Powerhouse Pond

Site Type: Ditch Start Date: 1945

Site Status: Active End Date:

Site The open portion of the ditch (approximately 700 meters long) is an unlined ditch running in an east-west direction located south of the Hot Semi Works Area (200-SO-1 Operable Unit). The

east-west direction located south of the Hot Semi Works Area (200-SO-1 Operable Unit). The ditch was fed with effluent from the 284-E Powerhouse through an underground pipeline located at the west end of the ditch. Another underground pipeline at the east end of the ditch discharged

the effluent to the 216-B-3C Pond.

Waste Type: Process Effluent

Description:

Waste The ditch received cooling water, boiler blowdown, floor drain discharge, softener regeneration

effluents, filter backwash, and sedimentation basin cleanout from 282-E, 283-E and 284-E. After

1997 a small amount of water from the Johnson Controls package boiler was discharged tot he

ditch.

Site Code: 200-E-19 Classification: Rejected (4/26/2000)

Site Names: 200-E-19, 216-B-3 Borrow Pit, B Pond **ReClassification:**

Borrow Area

Site Type: Depression/Pit (nonspecific) Start Date: 1994

Site Status: Inactive End Date:

Site The 216-B-3 Borrow Pit is a shallow, scarred gravel area adjacent to the northeast corner of the

Description: backfilled 216-B-3 Pond. It is slowly revegetating with native grasses and crested wheatgrass, but

large areas of bare ground remain.

Site Code: 200-E-112 Classification: Accepted

Site Names: 200-E-112; B Plant Process Sewers, 2904- **ReClassification:**

E-1- Pipeline from B Plant to 207-B Retention Basin; 2904-E-2 - Pipeline from

B Plant to 207-B or 216-B Ditches

Site Type: Process Sewer Start Date:

Site Status: Inactive **End Date:**

Site The site is two process sewers that run underground from B-Plant to the 207-B Retention Basin. The pipelines are known as 2904-E-1 and 2904-E-2. The pipelines are marked above ground with **Description:**

steel posts and marked as "Underground Radioactive Material/Pipeline." Access manholes are located at intervals along the length of pipelines. Vegetation over the pipelines consists of grass

and tumbleweeds, with several areas of bare soil.

Waste Type: Process Effluent

Waste The process sewer pipelines transferred liquid process effluent and cooling water to the retention **Description:** basin and the 216-B-2 ditches. The radioactivity levels were normally low and the water was

discharged from the retention basin to ditches that connected to the 216-B-3 Pond. However, in 1963 and 1970, Unplanned Releases UPR-200-E-32 and UPR-200-E-138 released significant

amounts of cerium-144 and strontium-90 to the process sewer pipelines.

200-E-118 **Site Code: Classification:** Accepted

200-E-118, 216-B-3 Diverter Station and **ReClassification: Site Names:**

Shack, Main Diverter Structure #3

Site Type: Control Structure

Site Status: Inactive **End Date:** 1994

The site is a small building (shack) that is labeled Main Diverter Structure #3. Inside the shack, Site the floor is made of metal grating. Below grade pipes and valves are visible through the grate. A **Description:**

section of the floor is open to the pipes below, and has a radiation rope across the opening. The rope is posted with an old Surface Contamination Area sign. There is a posted Contamination Area around a portion of the outside of the shack. Just outside of the posted Contamination Area is a valve, labeled 216-B-3-3 Diverter Valve. Two concrete manholes are present, one on each

Start Date:

side of the diverter valve.

Waste Type: Equipment

The site is an abandoned shed posted with Contamination Area signs. Waste

Description:

200-E-126 Classification: **Site Code:** Accepted

Site Names: 200-E-126, Underground Pipeline From **ReClassification:**

207-B to 216-B-3 Ditch and B Pond

Disposal System

Site Type: Radioactive Process Sewer **Start Date:** 1945 1997 **Site Status:** Inactive **End Date:**

The pipeline is marked with steel posts and Underground Radioactive Material - Pipeline signs. Site

A Diverter Station (#2) on this pipeline, located near the northeast corner of the 218-E-12A Burial **Description:**

> Ground, is posted with Contamination Area signs. The sample shack and Diverter Station #3, located east of the 200 East Area fence (Sitecode 200-E-118) is also radiologically posted.

Waste Type: Process Effluent

The pipeline transported 221-B Plant, PUREX, and 200 East Area Powerhouse effluent that Waste

Description: included process cooling water, steam condensate and chemical sewer waste. Site Code: 200-E-127 Classification: Accepted

Site Names: 200-E-127, PUREX Cooling Water Line, ReClassification:

Pipeline From PUREX to Gable and B-

Ponds

Site Type: Radioactive Process Sewer Start Date:

Site Status: Inactive End Date:

Site The pipeline is marked with steel posts and Underground Radioactive Material - Pipeline signs.

Description: A portion of the pipeline is under the Liquid Effluent Retention Facility (LERF) berm. North of

the 200 East Area 810 Gate, there are two separately posted Contamination Areas on top of the

underground pipeline.

Waste Type: Process Effluent

Waste The pipeline conveyed process cooling water from 202-A Building (Plutonium Uranium Description: Extraction [PUREX] Plant). From May 1958 to 1960, the unit received the above plus cooling

water from the contact condenser in the 241-A-431 Building. In 1960, the unit received the above plus the surface condensator cooling water in the 241-A-401 Building (A Tank Farm). From November 1967 to January 1968, the unit received the above plus the wastewater from the 284-E Powerhouse. From January 1968 to March 1969, the unit received the above plus the cooling water and steam condensate from the 244-AR Vault. In March 1969, the pipeline to the contact condenser cooling system from the 241-A-431 Building Vault was valved out. After March 1977, the unit received the above plus the 242-A Evaporator steam condensate cooling water. (RHO-CD-798 shows a valve at the east end of the 216-B-2-3 Ditch connecting to PUREX Cooling Water Line to Gable Pond. The graphic is labeled "Effluent Pipelines and

Transfer Capabilities for Gable Mountain and B Ponds".

Site Code: 216-E-28 Classification: Rejected (1/19/2000)

Site Names: 216-E-28, 216-E-25, 200 East Area ReClassification:

Contingency Pond

Site Type: Pond Start Date: 1986

Site Status: Inactive End Date:

Site This 216-E-28 Contingency Pond is inactive and dry. It is a large cobble filled depression that is

Description: divided into three lobes by soil berms. Each lobe has a 1.2 meter (48 inch) diameter culvert. It is

not marked or posted.

Site Code: 216-N-8 Classification: Accepted

Site Names: 216-N-8, West Lake, West Pond, 216-N-8 ReClassification:

Pond, Honeyhill Pond, Seepage Pond

Site Type:PondStart Date:Site Status:InactiveEnd Date:

Site The site is a pond of water surrounded by a white perimeter ring of dried alkali salt residue. The

Description: size and volume of the pond change with the seasons and groundwater levels.

Waste Type: Water

Waste Description:

Prior to the appearance of West Pond, this area was used as a disposal site for sewage sludge from the early Hanford construction camp. High alkaline and phosphate levels, as well as elevated pH values, may be attributed to this use of the pond area. Hanford drawing H-11-4327 shows a water line extending from the 606 Central Mix cement plant settling basins to Honeyhill. It indicates that the lake received water from the cement plant. Even though this unit never received direct discharges of contaminated effluents, it contains relatively high amounts of radionuclides (1,055 to 1,098 picocuries/liter in 1976), having the highest gross alpha (naturally occurring except for tritium) concentrations of all the 200 Area ponds. The actual source of existing activity is unknown. A possible main contributor is the leaching of naturally occurring radionuclides from the soil that has been concentrated by evaporation during the entire history of the unit.

Site Code: 600-118 Classification: Accepted

Site Names: 600-118, Hot Spot Northwest of Gable ReClassification: Rejected (4/26/2000)

Mountain Pond, Contaminated Soil Northwest of Gable Mountain Pond

Site Type:DitchStart Date:Site Status:InactiveEnd Date:

The stabilized site begins northwest of 216-A-25 Pond, and was formerly an overflow trench from **Description:** 216-A-25 (Gable Mountain Pond) that ran north-south, approximately 0.9 meters (6 feet) deep.

The site extends north, under the power lines where the site widens. The trench deepened again north of the power lines, so the site is narrower there, and fades out in a wider, but shallower area at the north end. The area outside the stabilized area is vegetated with sagebrush and cheatgrass. The stabilized area is sparsely vegetated with cheatgrass, crested wheatgrass, and Sandberg's

bluegrass.

The area is posted as an "Underground Radioactive Material" area.

This overflow site has been consolidated with its source, the 216-A-25 Gable Mountain Pond.

Waste Type: Soil

Waste The waste site was identified in the 1996 Flyover Survey and reported on April 11, 1996.

Description:

The Site Was Consolidated With:

Site Code: 216-A-25

Site Names: 216-A-25, Gable Mountain Swamp, 216-A-25 Swamp, Gable Mountain Pond

Reason: This site is an overflow from Gable Mountain Pond.

Site Code: 600-237 Classification: Rejected (4/26/2000)

Site Names: 600-237, Gable Pond (216-A-25) North **ReClassification:**

and South Borrow Pits

Site Type:Depression/Pit (nonspecific)Start Date:1984Site Status:InactiveEnd Date:1988

Site The borrow pits are large, shallow scraped areas along the north and south sides of the stabilized **Description:** Gable Pond. The stabilized pond surface was vegetated with wheat grass, but the borrow pits are

bare.

Site Code: UPR-200-E-14 **Classification:** Accepted

Site Names: UPR-200-E-14, UN-200-E-14, 216-B-3 ReClassification: Rejected (1/19/2000)

Pond Dike Break

1958 Unplanned Release **Site Type: Start Date: Site Status:** Inactive **End Date:** 1958

The site is an unplanned release that occurred as a result of a dike break in 216-B-3 Pond. In Site 1983, the 216-B-3A Pond lobe was built over the top of this release site. There is no visible **Description:**

evidence of this release. It is not physically marked or posted. There is a large percolation trench in the center of the 216-B-3A pond that is posted as a Soil Contamination Area. However, the

percolation trench was dug in 1984 and this Unplanned Release occurred in 1958.

This site has been consolidated with 216-B-3B RAD

Waste Type: Water

A dike break had the potential to carry material from any of the sources listed here. Waste Waste streams flowed from the 216-A-29 and 216-B-3-3 Ditches into the 216-B-3 Pond. Discharges to **Description:**

216-B-3 via 216-B-3-3 included: 221-B Building steam condensate and process cooling water; 284-E Powerhouse water; 244-CR Vault cooling water; 244-AR Vault and 242-A Evaporator cooling water; 202-A process cooling water, condenser cooling water, and air sampler vacuum

pumps seal cooling water; 241-BY Tank Farm condenser cooling water; and Waste

Encapsulation Storage Facility cooling water. Discharges to 216-B-3 via 216-A-29 included 202-A chemical sewer and acid fractionator condensate. The main pond received corrosive and toxic dangerous waste from two primary sources: the regeneration of the Plutonium Uranium Extraction (PUREX) plant demineralizer columns and from spills of dangerous or mixed waste from PUREX. The spills included hydrazine, cadmium nitrate, and ammonium flouride/ ammonium nitrate. The backwash from the regeneration of the demineralizer columns included

nitric acid, sulphuric acid, sodium hydroxide, and potassium hydroxide.

The Site Was Consolidated With:

Site Code: 216-B-3A RAD

Site Names: 216-B-3A RAD, 216-B-3A Expansion Lobe Residual Radioactive Waste, 216-B-3 1st Overflow

Pond

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-32 **Classification:** Accepted

Site Names: UPR-200-E-32, UN-200-E-32, Coil Leak **ReClassification:** Rejected (1/19/2000)

from 221-B

Unplanned Release 1963 **Site Type: Start Date: Site Status:** Inactive **End Date:** 1963

The site is an unplanned release that affected the 207-B Basin and the 216-B-2-1 Ditch. The Site unplanned release is not visually marked or posted. The 207-B Basin is labeled and posted as a **Description:**

Contamination Area. The 216-B-2-1 ditch is marked with AC-540 markers and is included within a larger Underground Radioactive Material area. This site has been consolidated with the 207-B

Retention Basin.

Waste Type: Process Effluent

Waste The B Plant 6-1 Rare Earth Storage Tank coil failed and cause a release to the retention basin **Description:** and 216-B-1 ditch. A sample of the effluent released to the 207-B Retention Basin was analyzed

in 1963. It was primarily Cerium-144 (30 curies) and .05 curies of strontium-90. Dose rates up to 500 millirad per hour were documented. Tumbleweeds that had blown into the ditch read up

to 50 rad/hr.

The Site Was Consolidated With:

Site Code: 207-B

Site Names: 207-B, B Plant Retention Basin, 207-B Retention Basin

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-34 Classification: Accepted

Site Names: UPR-200-E-34, Liquid Release to B-Pond ReClassification: Rejected (1/19/2000)

and Gable Pond, UN-200-E-34

Site Type: Unplanned Release Start Date: 1964
Site Status: Inactive End Date: 1964

Site This was a liquid unplanned release to a pond. There is no visual evidence of this release. The

Description: release effected the 216-B-3 Pond, 216-A-25 Pond and 216-A-29 Ditch. The 216-B-3 Pond, 216-

A-25 Pond, and 216-A-29 Ditch have all been surface stabilized and are posted as Underground

Radioactive Material Areas. This site has been consolidated with the 216-B-3 Pond.

Waste Type: Process Effluent

Waste The ponds and ditch were contaminated with approximately 10,000 curies of mixed fission products from a coil leak in the PUREX F-15 tank. Water and biota samples found niobium-95,

zirconium, yttrium, strontium-89, cerium-144, praseodymium-144, strontium-90 and cesium-137.

The Site Was Consolidated With:

Site Code: 216-B-3

Site Names: 216-B-3, B Pond, B-3 Pond, 216-B-3 Main Pond, B Swamp, 216-B-3 Swamp, B Plant Swamp

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-51 Classification: Accepted

Site Names: UPR-200-E-51, Liquid Release from Purex ReClassification: Rejected (1/19/2000)

to B-Pond, UN-200-E-51

Site Type: Unplanned Release Start Date: 1977

Site Status: Inactive End Date:

Site The site is an unplanned release that discharged to 216-A-29 Ditch, 216-B-3-3 Ditch, and 216-B-

Description: 3 Pond. There is no visual evidence of this release. It is not separately marked or posted. The

216-B-3 Pond, 216-A-29 Ditch and the 216-B-3-3 Ditch have all been backfilled and surface stabilized. They are posted Underground Radioactive Material areas. This site has been

consolidated with the 216-A-29 Ditch.

Waste Type: Chemicals

Waste A cadmium nitrate solution containing 15 kilograms (33 pounds) of cadmium was released to the

Description: pond and ditch system. Water samples found levels of cadmium to be 5 times the drinking water

standard

The Site Was Consolidated With:

Site Code: 216-A-29

Site Names: 216-A-29, Snow's Canyon, PUREX Chemical Sewer (CSL)

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-59 **Classification:** Accepted

Site Names: UPR-200-E-59, Contaminated Bird Nests **ReClassification:**

and Mud at 216-A-40 and 244-AR Vault,

UN-200-E-59

1979 **Site Type:** Unplanned Release **Start Date:**

End Date: Site Status: Inactive

The 216-A-40 Retention Basin was backfilled and stabilized in 1994. It is surrounded with Site

Description: cement posts and Underground Radioactive Material signs. The contaminated mud nests were

removed from the 244-AR Vault building.

Waste Type: Soil

Contaminated mud containing cesium-137 and cobalt-60 with readings of 10,000 to 20,000 Waste **Description:**

counts/minute was found on the outside of the 244-AR building and in the 216-A-40 basin. Mud

collected from the top of the bladder contained 120 picocuries/gram of cesium-137 and 116

picocuries/gram of cobalt-60.

Site Code: UPR-200-E-66 **Classification:** Accepted

Site Names: UPR-200-E-66, 216-A-42 Basin **ReClassification:**

Contamination Release, UN-216-E-66, UN-

200-E-66

Site Type: Start Date: 1984 Unplanned Release

Site Status: Inactive **End Date:**

The release is not separately marked or posted. The 216-A-42 Basin had been surrounded by a Site

Description: wire fence and posted with Soil Contamination signs. In 2001, the fence was removed and the

area was surface stabilized. It was covered with clean backfill and down posted to Underground

Radioactive Material (URM). The release site is located within the URM area.

Waste Type: Process Effluent

Waste The contamination consisted of beta/gamma particulates, with readings inside the area to 40,000

Description: counts per minute and outside to 3,000 counts per minute. A routine surface radiation survey

done in 1988 found spots of contamination on the south edge of the site with readings up to 200,000 disintegrations per minute (or 20,000 counts per minute). A radiation survey done outside the 216-A-42 Basin perimeter fence done in 1998 did not identify any contamination outside the basin.

Site Code: UPR-200-E-94 Classification: Accepted

Site Names: UPR-200-E-94, Vehicle Decontamination ReClassification: Rejected (2/10/2000)

Area, UN-216-E-22, UN-200-E-94

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

The site was a large gravel pit that was sometimes used to decontaminate equipment. The gravel pit had been posted with Surface Contamination Area (SCA) signs. The radiological posting was

removed from the gravel pit in 1984. The gravel pit was obliterated by heavy construction equipment in the area during the stabilization of the 216-B-3-1 and 216-B-3-2 ditches. The gravel

pit is no longer visible or marked.

Waste Type: Soil

Waste An earth moving vehicle was found to be contaminated with a maximum of 8000 counts per minute. Equipment decontamination efforts done in the gravel pit left a 300 counts per minute

residue on the bottom of the pit. The waste was unknown beta and gamma contamination.

Site Code: UPR-200-E-138 Classification: Accepted

Site Names: UPR-200-E-138, Liquid release from B- ReClassification: Rejected (1/19/2000)

Plant, UN-200-E-138, UPR-200-W-66

Site Type: Unplanned Release Start Date: 1970
Site Status: Inactive End Date: 1970

Site This is a liquid Unplanned Release from 221-B to the 216-B-2-2 Ditch that terminated in the 216-

Description: B-3 Pond. The site is within a large, surface stabilized, Underground Radioactive Material area

that includes the 216-B-2-1, 216-B-2-2 and 216-B-2-3 Ditches. The Unplanned Release is not

separately marked.

This site has been consolidated with the 216-B-2-2 Ditch.

Waste Type: Process Effluent

Waste Radioactive liquid was released while attempting to measure the liquid level in the Storage Tank

Description: 8-1, located inside the 221-B Building. A breakdown of the radioactive material released

indicates 1,495 curies (total beta) was discharged to the ditch including approximately 950 curies of strontium-90, 96 curies of cerium/promethium-144 and 1 curie of cesium-137.

The Site Was Consolidated With:

Site Code: 216-B-2-2

Site Names: 216-B-2-2, 216-B-2-2W, 216-B-1 Ditch

Reason: Within Boundary Of Larger Site

200-CW-2

Site Code: 207-S Classification: Accepted

Site Names: 207-S, REDOX Retention Basin, 207-S **ReClassification:**

Retention Basin

Site Type:Retention BasinStart Date:1951Site Status:InactiveEnd Date:1954

Site The basin has been backfilled to grade with dirt. It is surrounded with concrete marker posts and

Description: is currently posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received process cooling water and steam condensate from the 202-S Building. The **Description:** water was then discharged to the 216-S-17 Pond or the 216-S-16 Pond. Coil leaks inside the

202-S facility often caused contaminated effluent to be discharged to the retention basin.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-13

Site Names: UPR-200-W-13, Liquid Release from REDOX to 207-S and 216-S-17 Pond, UN-200-W-13

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-15

Site Names: UPR-200-W-15, Liquid Release from REDOX to 207-S and 216-S-17 Pond, UN-200-W-15

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-95

Site Names: UPR-200-W-95, UN-216-W-2, 207-S Retention Basin

Reason: Within Boundary Of Larger Site

Site Code: 216-S-16D Classification: Accepted

Site Names: 216-S-16D, 202-S Swamp (New) and ReClassification:

Ditch, 202-S Swamp #1, REDOX Pond #2,

216-S-24 Ditch

Site Type:DitchStart Date:1957Site Status:InactiveEnd Date:1975

Site The site is a ditch that connected the 202-S Building to the 216-S-16 Pond. The side slope of the

Description: open ditch was 2:1. The ditch has been backfilled and surface stabilized. It is posted with

Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste January 1957 is considered the most accurate start date for this waste unit. The site received process cooling water and steam condensate from 202-S Building until June 1967. After the

202-S Building (REDOX) was put on standby in July 1967, the site received condenser and

vessel cooling water from concentrator boil-down operations in the 202-S Building. In 1973, the 216-U-9 ditch was connected to the 216-S-16 ditch to allow the 216-U-10 pond overflow to reach the 216-S-16 pond.

Site Code: 216-S-16P Classification: Accepted

Site Names: 216-S-16P, 202-S Swamp and Ditch, 202-S ReClassification:

Swamp #1, REDOX Pond #2

Site Type:PondStart Date:1957Site Status:InactiveEnd Date:1975

SiteThe pond consisted of four lobes separated by dikes and a leach trench that extended east from Lobe #2 toward the 216-S-17 Pond. The pond has been backfilled and surface stabilized. It is surrounded by concrete markers and posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received process cooling water and steam condensate from the 202-S Building until Description: June 1967. Only lobe #1 received REDOX process effluent. The 202-S Building process

(REDOX) was put on standby in July 1967. After July 1967, the site received condenser and vessel cooling water from concentrator boil-down operations in the 202-S Building via the 216-

S-16 Ditch and overflow from the 216-U-10 Pond via the 216-U-9 Ditch.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-47

Site Names: UPR-200-W-47, 216-S-16P Dike Release, UN-200-W-47

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-59

Site Names: UPR-200-W-59, Contaminated Liquid Released to 216-S-16P

Reason: Within Boundary Of Larger Site

Site Code: 216-S-17 Classification: Accepted

Site Names: 216-S-17, 202-S Swamp, 202-S REDOX ReClassification:

Swamp, 216-S-1 REDOX Pond No. 1,

REDOX Swamp, 216-S-1

Site Type:PondStart Date:1951Site Status:InactiveEnd Date:1954

Site This site consists of a 6.9 to 8.5 hectare (17 to 21 acre) pond. The site was interim stabilized in

Description: 1984 and posted as "Underground Radioactive Material".

The original pond site was formed by creating an earthen dike approximately one meter (3.3 feet) high on the north and west sides of the site. The designated use area was approximately 23 hectares (57 acres), but photographs indicated that only 8 hectares (20 acres) were inundated at any time. The pond averaged about 0.3 meters (1 foot) deep with a maximum depth of 0.6 meters

(2 feet).

Waste Type: Process Effluent

Waste Description:

Until January 1953, the site received process cooling water and steam condensate from the 202-S Building. After January 1953, the site received the 202-S Building effluent and the overflow from the 216-U-10 Pond via the 216-U-9 Ditch. During April and May of 1953, solvent naphtha was utilized to kill the vegetation, but it did not work. During July 1953, copper sulfate, 2-4-D, and sodium chlorate were also used to kill vegetation.

In October 1952, a steam coil failure (UPR-200-W-15) in the REDOX D-12 Waste Concentrator caused gross contamination of process cooling water, the 207-S Retention Basin and the 216-S-17 Swamp. During November 1952, another unplanned release (UPR-200-W-13) caused further contamination at the 207-S Retention Basin and the 216-S-17 Swamp.

The major potential radiological contaminants of concern are cesium-137, strontium-90, and uranium-238.

Site Code: 216-S-172 Classification: Accepted

Site Names: 216-S-172, 216-S-172 Weir Box and ReClassification:

Control Structure, 2904-S-172 Weir, 216-S-

172 Control Structure

Site Type:Control StructureStart Date:1956Site Status:InactiveEnd Date:1976

Site This site is an underground concrete structure with interior hand operated sluice gates. Float wells were attached to the outside north and south walls. The structure has been covered with soil

and posted with Underground Radioactive Material/Cave-In Potential signs.

Waste Type: Process Effluent

Waste The unit contains unquantified amounts of low-level radioactive solid waste. In 1987, the **Description:** Hanford Site Waste Management Units Report stated the maximum radiation reading on the

structure was 25 millirads per hour.

Site Code: 2904-S-160 Classification: Accepted

Site Names: 2904-S-160, 2904-S-160 Control Structure, ReClassification:

2904-S-160 Weir

Site Type:Control StructureStart Date:1954Site Status:InactiveEnd Date:1976

Site The unit is an inactive waste management unit consisting of a below grade pentagonal structure

with reinforced concrete walls, floor, and roof. Sixty centimeter (24 inch) diameter vitrified clay pipes provided inlet and outlet flow for the structure. The site has been surface stabilized and is

posted with Underground Radioactive Material/Cave-in Potential signs.

Waste Type: Process Effluent

Description:

Waste The unit contains low-level contaminated concrete and piping. The quantity of contaminated waste has not been determined. There is beta/gamma contamination in the soil and smearable

contamination on the surfaces of the box. Contamination originated from effluents traveling

through the weir.

Site Code: 2904-S-170 Classification: Accepted

Site Names: 2904-S-170, 2904-S-170 Weir Box, 2904- **ReClassification:**

S-170 Control Structure

Site Type:Control StructureStart Date:1954Site Status:InactiveEnd Date:1976

Site The 2904-S-170 Control Structure is an inactive, below grade concrete structure. From the surface

Description: it can be identified by four metal posts surrounding the site. It is posted with Underground

Radioactive Material signs. Two 76 centimeter (30 inch) diameter vitrified clay pipes provided inlet and outlet underground access to the structure. The 2904-SA sample building is located over the south end of the weir structure. A manhole and a riser are visible adjacent to the 2904-SA

building.

Waste Type: Process Effluent

Waste This unit contains low-level contaminated concrete and piping. The quantity of contaminated waste has not been determined. There is beta/gamma smearable contamination and penetrating

radiation present. Contamination was derived from the effluents traveling through the unit.

Site Code: 2904-S-171 Classification: Accepted

Site Names: 2904-S-171, 2904-S-171 Weir Box, 2904- **ReClassification:**

S-171 Control Structure, 216-S-171

Site Type:Control StructureStart Date:1954Site Status:InactiveEnd Date:1976

Site The 2904-S-171 Control Structure is a below grade, rectangular concrete weir structure. The inlet

Description: piping consisted of 46 centimeter (18 inch) diameter vitrified clay pipe. The outlet piping

consisted of 46 centimeter (18 inch) diameter corrugated metal pipe. The site has been backfilled

with clean material and is posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste This unit contains low-level contaminated concrete and piping. The quantity of contaminated

Description: waste has not been determined. There were beta/gamma smearable contamination and

recordable radiation readings with a Cutie Pie (hand-held radiation monitor) on the above

ground portions of the structure before it was surface stabilized.

Site Code: 200-W-25 Classification: Rejected (4/20/2000)

Site Names: 200-W-25, 216-S-16 Borrow Pit **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1984

Site Status: Inactive End Date:

Site The site is a shallow, scraped area that forms a semi-circle around the north and west edges of the

Description: stabilized 216-S-16 Pond. The site is mostly revegetated with crested wheatgrass and large

patches of native plants.

Site Code: 200-W-26 Classification: Rejected (4/20/2000)

Site Names: 200-W-26, 216-S-17 Borrow Pit ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date: 1984

Site Status: Inactive End Date:

Site The site is an unmarked shallow scraped area located south of the stabilized 216-S-17 Pond. It is

Description: slowly revegetating.

Site Code: UPR-200-W-13 Classification: Accepted

Site Names: UPR-200-W-13, Liquid Release from ReClassification: Rejected (1/25/2000)

REDOX to 207-S and 216-S-17 Pond, UN-

200-W-13

Site Type: Unplanned Release Start Date: 1952

Site Status: Inactive End Date:

Site The unplanned release was a liquid contamination release that effected the 207-S Retention Basin

Description: and the 216-S-17 Pond (REDOX Swamp). Both the pond and the basin have been surface

stabilized and posted as "Underground Radioactive Material". The unplanned release is not

separately marked or posted.

Waste Type: Steam Condensate

Waste In a three day period, the dose rate 15 centimeters (6 inches) over the inlet water stream to the

Description: pond increased from 6 millireps/hour to 700 millireps/hour.

The acronym "rep" stands for Roentgen equivalent physical. One rep equals 95 ergs/gram

(0.0095 joules/kilogram). One rep is roughly equivalent to 1 rad.

The Site Was Consolidated With:

Site Code: 207-S

Site Names: 207-S, REDOX Retention Basin, 207-S Retention Basin

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-15 Classification: Accepted

Site Names: UPR-200-W-15, Liquid Release from ReClassification: Rejected (1/25/2000)

REDOX to 207-S and 216-S-17 Pond, UN-

200-W-15

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site The unplanned release was a contaminated liquid release to the 207-S Retention Basin and the

Description: 216-S-17 Pond (REDOX Swamp). Both the pond and the basin are surface stabilized and posted

as "Underground Radioactive Material". The release is not separately marked or posted.

Waste Type: Steam Condensate

Waste Description:

According to the October 1952 monthly report, fission product activity was detected in the 207-S Retention Basin and at the edge of the 216-S-17 Pond. Measurements taken of dry sand at the

periphery of the pond were as high as 2200 millireps/hour (CP window open)and 80

millirads/hour (CP window closed).

The acronym "rep" stands for Roentgen equivalent physical. One rep equals 95 ergs/gram (0.0095 joules/kilogram). One rep is roughly equivalent to 1 rad.

The Site Was Consolidated With:

Site Code: 207-S

Site Names: 207-S, REDOX Retention Basin, 207-S Retention Basin

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-47 Classification: Accepted

Site Names: UPR-200-W-47, 216-S-16P Dike Release, ReClassification: Rejected (1/25/2000)

UN-200-W-47

Site Type: Unplanned Release Start Date: 1958
Site Status: Inactive End Date: 1959

Site The site is an unplanned release of contaminated cooling water from REDOX that was released to **Description:** the 216-S-16 Pond. The 216-S-16 Pond has been surface stabilized, planted with grasses, and

n: the 216-S-16 Pond. The 216-S-16 Pond has been surface stabilized, planted with grasses, and posted with "Underground Radioactive Material" signs. The area contaminated by the release is not separately marked or posted. This unplanned release has been consolidated with the 216-S-

16 Pond.

Waste Type: Process Effluent

Waste The release consisted of contaminated process cooling water from REDOX. The ground was

Description: contaminated to a maximum reading of 750 millirads/hour.

The Site Was Consolidated With:

Site Code: 216-S-16P

Site Names: 216-S-16P, 202-S Swamp and Ditch, 202-S Swamp #1, REDOX Pond #2

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-59 Classification: Accepted

Site Names: UPR-200-W-59, Contaminated Liquid ReClassification: Rejected (1/25/2000)

Released to 216-S-16P

Site Type:Unplanned ReleaseStart Date:1965Site Status:InactiveEnd Date:1965

Site The site is a liquid unplanned release to the 216-S-16 Pond (WIDS site code 216-S-16P), and has

Description: been consolidated with that pond. The pond has been surface stabilized and posted as an

"Underground Radioactive Material" area. The release is not separately marked or posted.

Waste Type: Process Effluent

Waste Beta/gamma radiation with a maximum dose rate of 190 millirads/hour was measured at the 216-

Description: S16 Pond #1 Pond (lobe) inlet.

The Site Was Consolidated With:

Site Code: 216-S-16P

Site Names: 216-S-16P, 202-S Swamp and Ditch, 202-S Swamp #1, REDOX Pond #2

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-95 Classification: Accepted

Site Names: UPR-200-W-95, UN-216-W-2, 207-S **ReClassification:** Rejected (1/25/2000)

Retention Basin

Site Type:Unplanned ReleaseStart Date:1951Site Status:InactiveEnd Date:1954

Site The site is a liquid unplanned release that contaminated the 207-S Retention Basin. The retention

Description: basin has been backfilled and surface stabilized. The basin is marked and posted with

Underground Radioactive Material signs. The release is not separately marked or posted. The

unplanned release has been consolidated with the 207-S site.

Waste Type: Process Effluent

Waste The basin has been contaminated with approximately 10 curies of fission products.

Description:

The Site Was Consolidated With:

Site Code: 207-S

Site Names: 207-S, REDOX Retention Basin, 207-S Retention Basin

Reason: Within Boundary Of Larger Site

200-CW-3

Site Code: 216-N-1 Classification: Accepted

Site Names: 216-N-1, 212-N Swamp, 216-N-1 Swamp, ReClassification:

216-N-1 Covered Pond

Site Type:PondStart Date:1944Site Status:InactiveEnd Date:1952

Site No chains or barriers delineate the boundaries of this site. A single permanent concrete monument marks the north end of the pond site. The concrete marker has one Underground

Radioactive Material sign on it.

Waste Type: Process Effluent

Waste The site received the basin overflow from the 212-N Building. The waste type is low level

Description: radioactivity.

Site Code: 216-N-2 Classification: Accepted

Site Names: 216-N-2, 212-N Storage Basin Crib #1, ReClassification:

212-N #1 Trench, 216-N-1 Trench, 216-N-

2 Trench

Site Type: Trench Start Date: 1947
Site Status: Inactive End Date: 1947

Site The site is surrounded by a light weight chain barrier and concrete markers. It is posted with

Description: "Underground Radioactive Material" warning signs. A single chain encloses both the 216-N-2

and 216-N-3 Waste Sites.

Waste Type: Process Effluent

Waste The site received the basin water and sludge from the 212-N Fuel Storage Basin when it was drained for special tests. The site was deactivated by removing the overground piping and

backfilling the unit with 1.8 meters (6 feet) of clean soil. Typically practice was to place the

aboveground piping in the trench prior to backfilling. The waste type is low activity.

Site Code: 216-N-3 Classification: Accepted

Site Names: 216-N-3, 212-N Storage Basin Crib #2, **ReClassification:**

212-N #2 Trench, 212-N #2 Grave, 212-N-

2 Trench, 212-N-3 Trench

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site The site is surrounded by a light weight chain barrier and concrete markers. It is posted with

Description: Underground Radioactive Material signs. Both the 216-N-2 and 216-N-3 trenches are located

within the chained barrier.

Waste Type: Process Effluent

Waste **Description:** The site received fuel storage basin water and sludge from the 212-N Building when the facility was shut down in 1952. The site was deactivated by removing the overground piping and backfilling the unit with 1.8 meters (6 feet) of clean soil. Typically, the above ground pipe was placed into the trench prior to backfilling. The waste type is low activity.

Site Code: 216-N-4 **Classification:** Accepted

Site Names: 216-N-4, 216-N-2, 216-N-4 Swamp, 212-P **ReClassification:**

Swamp

Pond 1944 **Site Type: Start Date:** Inactive **End Date:** 1952 **Site Status:**

The site is marked by "Underground Radioactive Material" warning signs attached to concrete Site

Description: AC-540 marker posts that surround the site.

Waste Type: Process Effluent

Waste The site received the basin overflow waste from the 212-P Building. The waste is low activity.

Description:

Site Code: 216-N-5 **Classification:** Accepted

Site Names: 216-N-5, 212-P Storage Basin Crib, 212-P **ReClassification:**

Trench, 212-P Grave, 216-N-5 Trench

Site Type: Trench **Start Date:** 1952 **Site Status:** Inactive **End Date:** 1952

The site is surrounded by a light weight chain barrier and concrete markers. It is posted with Site

"Underground Radioactive Material" warning signs. **Description:**

Process Effluent **Waste Type:**

The site received the basin water and sludge cleanout from the 212-P Basin during shutdown of Waste **Description:**

the area. Typically, the above ground piping was placed in the trench prior to backfilling. The

waste type is low activity.

Site Code: 216-N-6 **Classification:** Accepted

216-N-6, 212-R Swamp, 216-N-6 Swamp **ReClassification: Site Names:**

1944 **Site Type:** Pond **Start Date: Site Status:** Inactive **End Date:** 1952

Site The site is marked with "Underground Radioactive Material" warning signs attached to concrete

AC-540 marker posts. **Description:**

Process Effluent **Waste Type:**

The site received the normal overflow from the 212-R Fuel Storage Basin. The waste is low Waste

Description: activity. Site Code: 216-N-7 Classification: Accepted

Site Names: 216-N-7, 212-R Storage Basin Crib, 212-R ReClassification:

Trench, 212-R Grave, 216-N-7 Trench

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site The site is delineated with light weight chain and concrete marker posts. It is posted with

Description: "Underground Radioactive Material" signs.

Waste Type: Process Effluent

Waste The site received the water and sludge from 212-R Fuel Storage Basin clean out. The site was

Description: retired when 212-R was shut down. The waste type is low activity.

200-CW-4

Site Code: 207-T Classification: Accepted

Site Names: 207-T, T Plant Retention Basin, 207-T, 207- **ReClassification:**

T Retention Basin

Site Type:Retention BasinStart Date:1944Site Status:InactiveEnd Date:1995

Site The retention basin has been backfilled to grade. It is posted as an Underground Radioactive

Description: Material area.

Waste Type: Steam Condensate

Waste The unit received potentially low-level radioactive waste from T Plant process cooling and **Description:** ventilation steam condensate, which was discharged to the 216-T-4-1 and 214-T-4-2 Ditches.

From 11/44 to the 1950's, the site received process cooling water from process equipment jackets in 221-T and 224-T buildings. From early 1950's to 1955, the site received the same, plus 242-T Evaporator cooling water. From 1955 to 1965, the site received the same minus 242-T Evaporator cooling water. From 1965 to late 1960's, the site received the same plus 242-T Evaporator cooling water. From late 1960's to 1973, the site received the same minus 242-T Evaporator cooling water. From 1973 to 1976, the site received the same plus 242-T Evaporator cooling water. After 1976, the site received intermittent flow from 221-T, 221-TA, and 224-T 224-T buildings. The effluent discharge was rerouted to the 200 Area TEDF in 1995. The unit

was backfilled with dirt in 1996.

Site Code: 216-T-1 Classification: Accepted

Site Names: 216-T-1, 221-T Ditch, 221-T Trench, 216- ReClassification:

T-1 Trench

Site Type:DitchStart Date:1944Site Status:InactiveEnd Date:1995

Site The ditch has been backfilled. It is currently marked and posted with Underground Radioactive

Description: Material signs.

Waste Type: Steam Condensate

Waste From 1944 until 6/56, the site received miscellaneous waste from pilot plant experimental work, intermittent decontamination waste, and waste from the head end of the 221-T Building. From

6/56 to 1/64 the ditch was inactive due to the production operations at T Plant being shut down. From 1/64 to 6/70, the site received cooling water from the blowdown vessel in the 271-T Building and miscellaneous waste from PNL head end operations in the 221-T Building. After

6/70, the site received condensate from steam-heated radiators at the head end of 221-T Building. During standdown of PNL operations, the discharge of 271-T and other 221-T head end waste was discontinued. The site also received sodium hydroxide wash water waste solution (less than 1,000 gal/month [3,800 L/month]) from the Sodium-Air-Water Reaction Emergency Air Cleaning Development-HEDL. This waste water was nonradioactive and generally wet

only the bottom of the unit to approximately 150 ft (46 m) from the outfall.

Site Code: 216-T-4-1D Classification: Accepted

Site Names: 216-T-4-1D, 216-T-4 Ditch, 216-T-4

Swamp

Site Type:DitchStart Date:1944Site Status:InactiveEnd Date:1972

Site The original ditch is not currently visible. The ditch was replaced by the 216-T-4-2 Ditch in **Description:** 1972. The first 15 meters (50 feet) of the original (216-T-4-1D) ditch was reused in the

replacement ditch construction. The 216-T-4-1 Ditch was surface stabilized along with the 216-T-4-2 replacement ditch in 1995. The area is posted as an Underground Radioactive Material area.

ReClassification:

Waste Type: Steam Condensate

Waste Description:

From 1944 to September 1951, the site received process cooling water from the 221-T and 224-T Buildings via the 207-T Retention Basin and steam condensate from 221-T Building. From September 1951 to July 1955, the site received the above listed streams plus condenser cooling water and steam condensate from 242-T Evaporator. From July 1955 to August 1956, the site received the same as November 1944 to September 1951. From August 1956 to June 1957, the site received steam condensate from 221-T. From June 1957 to July 1964, the site was on standby. From July 1964 to December 1965, the site received decontamination waste from 2706-T. From December 1965 to November 1970, the site received the above listed streams plus condenser cooling water from 242-T Building. After November 1970, the site received condenser cooling water from 242-T Building. The total plutonium is 1.41 grams (3.1E-3 pounds) according to Hanford Defense Waste Environmental Impact Statement data.

Site Code: 216-T-4-2 Classification: Accepted

Site Names: 216-T-4-2, 216-T-4-2 Ditch ReClassification:

Site Type:DitchStart Date:1972Site Status:InactiveEnd Date:1995

Site The ditch has been backfilled and surface stabilized. It is currently marked and posted with

Description: Underground Radioactive Material signs. It has a grass cover.

Waste Type: Steam Condensate

Waste Description:

The site received steam condensate and condenser cooling water from the 242-T Evaporator and nonradioactive wastewater from 221-T air conditioning filter units and floor drains. Total Pu is 1.41 g (3.1E-3 lb) for this unit according to the Hanford Defense Waste Environmental Impact

Statement data.

Site Code: 216-T-4A Classification: Accepted

Site Names: 216-T-4A, 216-T-4 Swamp, 216-T-4-1 (P), **ReClassification:**

216-T-4-1 Pond

Site Type:PondStart Date:1944Site Status:InactiveEnd Date:1972

Site The pond was located in a natural surface depression forming an L-shaped shallow pond covering **Description:** approximately 6.5 hectares (16 acres). The pond is no longer visible. It was exhumed in 1972 to

make room for the expansion of the 216-W-2A Burial Ground.

Wasta Typa Steam Condensate

waste type: Steam Congensate

Waste Description:

via 207-T Retention Basin and steam condensate from 221-T Building. From September 1951 to July 1955, the site received same as above plus condenser cooling water and steam condensate from the 242-T Evaporator. From July 1955 to August 1956, same as November 1944 to September 1951. From August 1956 to June 1957, the site received steam condensate from 221-T Building. From June 1957 to July 1964, the site was on standby. From July 1964 to December 1965, the site received decontamination waste from 2706-T Building. From

Until September 1951, the site received process cooling water from 221-T and 224-T Buildings

December 1965, the site received decontamination waste from 2706-T Building. From December 1965 to November 1970, same as above plus condenser cooling water from 242-T Building. After November 1970, the site received condenser cooling water from 242-T Building.

Site Code: 216-T-4B Classification: Accepted

Site Names: 216-T-4B, 216-T-4 New Pond, 216-T-4-2 **ReClassification:**

(P), 216-T-4-2 Pond

Site Type:PondStart Date:1972Site Status:InactiveEnd Date:1995

Site The pond is no longer visible. The a portion of the pond is located within the area designated as **Description:** the 218-W-3AE burial ground. It is not separately marked or posted from the burial ground

postings.

Waste Type: Steam Condensate

Waste The site received steam condensate and condenser cooling water from the 242-T Evaporator and

Description: nonradioactive wastewater from 221-T air conditioning filter units and floor drains.

Site Code: 216-T-12 Classification: Accepted

Site Names: 216-T-12, 207-T Sludge Grave, 207-T ReClassification:

Sludge Pit, 216-T-11

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site There is no visible evidence of this waste site. The area around the 207-T Retention Basin,

Description: including the northeast corner where this pit was located, has been stabilized with clean backfill

material and posted with Underground Radioactive Material signs. The sludge pit is not

separately marked.

Waste Type: Sludge

Waste The site received contaminated sludge from the 207-T Retention Basin. The waste is low in salt

Description: and is neutral to basic.

Site Code: 200-W-88 Classification: Accepted

Site Names: 200-W-88, T Plant Process Sewer Pipelines ReClassification:

Site Type:Process SewerStart Date:1944Site Status:InactiveEnd Date:1995

Site Description:

The site is two vitrified clay process sewer pipelines. The southern most process sewer line is a 61 centimeter (24 inch) diameter, underground vitrified clay pipeline extending from the south end of T Plant to the 207-T Retention Basin. The northern process sewer line is a 46 centimeter (18 inch) diameter vitrified clay pipe that extends from the south end of T Plant and by passes the 207-T Retention Basin. It connects to the 207-T discharge pipe west of the retention basin. There are 1.2 meter (4 foot) diameter, yellow concrete manholes visible at intervals along the sewer lines. This site also included a posted contamination area located over one of the pipelines. The Contamination Area was surface stabilized in April 2002 and the posting changed to Underground Radioactive Material.

Waste Type: Process Effluent

Waste The Process Sewer effluent contained chemicals and low level radiological contaminants from T Plant process and activities.

200-CW-5

Site Code: 207-U Classification: Accepted

Site Names: 207-U, 207-U Retention Basin ReClassification:

Site Type: Retention Basin Start Date: 1952

Site Status: Active End Date:

Site The unit is a plastic lined concrete basin divided into two equal halves, with a capacity of **Description:** 3.785E+06 liters (1E+06 gallons). The basin structure is posted as a Contamination Area. The

bottom dimensions for each basin are 32 by 32 meters (106 by 106 feet). The total overall dimensions at the top ledge 75 by 38 meters (246 by 123 feet), 2 meters deep (6.5 feet). There is an inlet structure on the east and an outlet structure on the west side, on the outside of the basins. Each basin has a 0.9 by 0.9-meter (3 by 3-foot) sump. There is also a sampler cabinet and a

sample vault on the east side of the basins near the inlet structure.

There are two unplanned release sites (UPR-200-W-111 and UPR-200-W-112) adjacent to the basin where sludge was removed and buried. These burial sites are located within 3.1 meters (10 feet) of the basin on the north side and on the south side, near the western corners.

An unused sampler cabinet is located on the east side of the basin, as well as a sample vault that is a confined space.

Waste Type: Steam Condensate

Waste Until 1972, the unit received steam condensate and cooling water from 224-U Building and chemical sewer waste from the 221-U Building. After 1972, the unit has received only cooling water from 224-U Building and chemical sewer waste from the 221-U Building.

chemical sewer waste from the 221-U Building. After 1972, the unit has received only cooling water from 224-U Building. The basin was temporarily replaced by 216-U-16 Crib (1984 through 1986) but was reactivated when 216-U-16 Crib was taken out of service. The effluent from the basin was discharged to the 216-U-10 Pond via the 216-U-14 Ditch until the basin outlet was plugged in 1994. Presently, the basin is receiving storm water run off from the 224-U

building. The water is allowed to evaporate in the basin.

Site Code: 216-U-9 Classification: Accepted

Site Names: 216-U-9, U Swamp-S Swamp Ditch, 216-U- ReClassification:

6

Site Type:DitchStart Date:1952Site Status:InactiveEnd Date:1975

The site currently appears as a dry, V shaped depression. It is not marked or radiologically posted. It appears on drawing H-2-44510 as a "Y" shaped ditch. The east fork lead to 216-S-17

Pond and the west fork lead to 216-S-16 Pond. Although historical documentation indicates the

fork to the 216-S-17 pond was backfilled, a 1999 site visit noted that both forks of the ditch

appear to be dry, "V" shaped excavation

Waste Type: Process Effluent

Waste The site received the overflow from the 216-U-10 Pond.

Description:

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-139

Site Names: UPR-200-W-139, Liquid Release to the 216-U-9 Ditch, UN-200-W-139, UPR-200-W-18

Reason: Within Boundary Of Larger Site

Site Code: 216-U-10 Classification: Accepted

Site Names: 216-U-10, U Swamp, 216-U-1, 216-U-10 ReClassification:

Pond, 231 Swamp

Site Type:PondStart Date:1944Site Status:InactiveEnd Date:1985

Site This site is a 12 hectare (30 acre), backfilled, surface stabilized pond. It is posted with

Description: Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The large volumes of low-level wastewater and occasional isolated releases of considerably higher level, non-routine discharges have resulted in the accumulation of transuranic, fission

product and activation product inventories. It is estimated that 90% of the plutonium introduced to the waste stream from Z Plant was retained in the ditches (216-Z-1, 216-Z-11 and 216-Z-19).

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-104

Site Names: UPR-200-W-104, UN-216-W-14, 216-U-10 Pond Leach Trench, U Pond Fingers

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-105

Site Names: UPR-200-W-105, UN-216-W-15, 216-U-10 Pond Leach Trench

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-106

Site Names: UPR-200-W-106, UN-216-W-16, 216-U-10 Pond Leach Trench

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-107

Site Names: UPR-200-W-107, UN-216-W-17, 216-U-10 Pond Flood Plain

Reason: Within Boundary Of Larger Site

Site Code: 216-U-11 Classification: Accepted

Site Names: 216-U-11, U Swamp Extension Ditch, 216- ReClassification:

U-12, 216-U-11 Trench, 216-U-11 Ditch, 216-U-11 (old ditch), 216-U-11 (new ditch)

Site Type:DitchStart Date:1944Site Status:InactiveEnd Date:1957

Site This site consists of a backfilled, interim stabilized ditch that is posted with "Underground

Description: Radioactive Material" signs.

Waste Type: Process Effluent

Waste **Description:**

The ditch received overflow from the 216-U-10 Pond. A limited field investigation of highpriority waste units was conducted from August 1993 through August 1994. This investigation included the 216-U-11 Ditch. A special surface radiation survey was done with the MSCM II tractor and two surface soil samples were collected near the two outlet lines. Approximately 6% of the ditch surveyed with the tractor showed readings elevated above background. However, a recheck of these areas with hand-held instruments did not show elevated readings, so it is assumed the elevated readings were due to sub-surface contamination. The surface soil sample results were insignificant.

Site Code: 216-U-14 **Classification:** Accepted

216-U-14, 216-U-14 Ditch, Laundry Ditch **ReClassification: Site Names:**

Site Type: Ditch **Start Date:** 1944 1995 **Site Status:** Inactive **End Date:**

The entire ditch has been backfilled and surface stabilized. It is posted as Underground Site

Description: Radioactive Material.

Waste Type: Process Effluent

Waste **Description:** From 7/44 to 9/44, the site received wastewater from the 284-W Powerhouse. From 9/44 to 1/50, the same plus waste from 2723-W (original laundry and mask cleaning station). From 1/50 to 3/52, received wastewater from 284-W and 2724-W Laundry Building (new laundry facility). From 3/52 to 5/54, the same plus chemical sewer waste from 221-U and cooling water from 224-U. From 5/54 to 8/55, the same plus cooling water from 241-U-110 condenser tank. From 8/55 to 11/73, the same plus 271-U cooling water. From 11/73 to 4/80, the same plus 242-S Evaporator condensate and cooling water. From 4/80 to 9/81, the same minus 242-S condensate, 2723-W and 2724-W waste. From 9/81 to 7/84, the same minus 221-U, 224-U, and 271-U waste. The 221-U and 224-U effluent entered the ditch after passing through the 207-U Retention Basin. The 216-U-16 crib was built in 1984 to accept 224-U effluent that had previously been discharged to the ditch. However, the 216-U-16 crib failed in 1985. Some 224-U effluent was diverted back to the 216-U-14 Ditch until November 1994, when the outlet pipe to the 207-U Retention Basin was permanently isolated and filled with concrete. The portion of the ditch, located west of Cooper Ave., received effluent from the 242-S Evaporator and remained active until April 1995. Discharge from the 242-S Evaporator was eliminated in 1995 ending all discharges to this unit.

The Following Sites Were Consolidated With This Site:

Site Code: 200-W PP

200-W PP, 200-W Powerhouse Pond, 200 West Powerhouse Ponds, 284-W-B **Site Names:**

Reason: Within Boundary Of Larger Site

Site Code: 200-W PP **Classification:** Accepted

200-W PP, 200-W Powerhouse Pond, 200 **ReClassification:** Rejected (4/20/2000) **Site Names:**

West Powerhouse Ponds, 284-W-B

Site Type:PondStart Date:1984Site Status:InactiveEnd Date:1995

Site The unit consists of two elongated basins. Drawing H-2-94251 identifies the north basin as a **Description:** settling pond and the south basin as a seepage pond. The sides and bottom are covered with

cobbles. The head wall and the spillway between the basins are made of concrete.

This site has been consolidated with the 216-U-14 Ditch, and will be included in the 200-CW-5

Operable Unit.

Waste Type: Water

Waste The unit received wastes from steam production and water treatment activities from the 284-W **Description:** Powerhouse. The major components of the powerhouse effluent included quench water for the

boiler, basin flush water, softener backflush from the filter systems, and boiler blowdown. Approximately 23.8 million liters per month (6.29 million gallons per month) of liquid waste

was discharged to this unit.

The Site Was Consolidated With:

Site Code: 216-U-14

Site Names: 216-U-14, 216-U-14 Ditch, Laundry Ditch

Reason: Within Boundary Of Larger Site

Site Code: 200-W-28 Classification: Rejected (4/20/2000)

Site Names: 200-W-28, 216-U-10 Borrow Pit, U Pond ReClassification:

Borrow Area

Site Type: Depression/Pit (nonspecific) Start Date: 1985

Site Status: Inactive End Date:

Site The 216-U-10 Borrow Pit is a large shallow, scarred sandy area adjacent to the north side of the

Description: backfilled 216-U-10 Pond. It is sparsely vegetated with crested wheatgrass.

Site Code: 200-W-29 Classification: Rejected (4/20/2000)

Site Names: 200-W-29, 216-U-11 Borrow Pit **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1985

Site Status: Inactive End Date:

Site The site is a large shallow, scraped area south of the stabilized 216-U-11 Ditches. The area has

Description: very little vegetation.

Site Code: 200-W-84 Classification: Accepted

Site Names: 200-W-84, U Plant Process Sewer **ReClassification:**

Site Type:Process SewerStart Date:Site Status:InactiveEnd Date:

Site The waste site is an underground, 46 centimeter (18 inch) diameter, vitrified clay pipeline. It

Description: terminated at a timber headwall where the flow entered the 216-U-14 Ditch. The surface of the

pipeline is marked with Underground Radioactive Material and Pipeline signs. At intervals along

the pipeline, there are 1.2 meter, (4 foot) diameter, yellow manholes.

Waste Type: Process Effluent

Waste The 216-U-14 Ditch received 221-U chemical sewer effluent (via this vitrified clay pipeline)

Description: From January 1952 through July 1984.

Site Code: 200-W-102 Classification: Accepted

Site Names: 200-W-102, Pipeline from **ReClassification:**

Laundry/Powerhouse to 216-U-14 Ditch

Site Type:Process SewerStart Date:1944Site Status:InactiveEnd Date:1981

Site The underground pipeline is not separately marked or posted. Several manholes are visible along

Description: the line that have Confined Space and Radiation Area postings.

Waste Type: Process Effluent

Waste Detergents and radioactive contamination from laundry worn in radiation areas are included in

Description: the laundry effluent discharge.

Site Code: 216-W-LWC Classification: Accepted

Site Names: 216-W-LWC, 216-W-LC, Laundry Waste ReClassification:

Crib, 216-W-LWC Crib, 216-W-1

Crib Start Date: 1981

Site Status: Inactive End Date: 1994

Site The crib is marked and posted with Underground Radioactive Material signs.

Description:

Site Type:

The unit consists of two independent crib structures (drain fields) and associated underground pipelines connecting to the 200-W-64 laundry facilities. Each crib bottom dimension is 150 ft (47 meters) by 133 ft (40.5 meters). Each structure consists of an 8-in (20 centimeters) P.V.C. central distribution pipe running east-west, 14 ft (4.3 m) below grade, from which six 4-in (10 cm) P.V.C. perforated drain lines extend the length of the unit of both sides (150 ft [47 m]). The drain lines run parallel to each other, 23 ft (7.0 m) apart. Beneath each lies a 5-ft (1.5 m) deep rock-filled trench, giving the bottom a serrated appearance. A 7-ft (2.1 m) layer of gravel fill (5,546 yd³

[4,243 m³]) was backfilled over to grade. The side slope is 1.5:1.

Waste Type: Water

Waste The site received all the process wastewater from the contaminated laundry facility (2724-**Description:** W/WA) and mask cleaning station (MO-412). The waste included radioactive residue from

W/WA) and mask cleaning station (MO-412). The waste included radioactive residue from the contaminated laundry and detergents. Bleach and flame retardant chemicals were added to some of the wash and rinse cycles. From 1981 to 1983, some waste oils, from a nearby fabrication shop, entered the waste stream through manhole B. The site became inactive in January 1994 when operations were initiated at an offsite contracted laundry facility. TPA M-17-34 required

elimination of all discharge to the Crib by January 1995.

Site Code: 216-Z-1D Classification: Accepted

Site Names: 216-Z-1D, 216-Z-1, Drain Ditch to U **ReClassification:**

Swamp, Z Plant Ditch

Site Type:DitchStart Date:1944Site Status:InactiveEnd Date:1959

Site The 216-Z-1D Ditch is a backfilled, surface stabilized unit that runs from a point east of the 231-Z

Description: Building, curving southward to the 216-U-10 Pond. The northern portion was converted to an underground pipeline; the southern portion of the ditch is co-located within a large Underground

Radioactive Material area that also includes the 216-Z-11 and 216-Z-19 ditches.

Waste Type: Process Effluent

Waste The 216-Z-1D Ditch received process cooling water, steam condensate, and pump sealant waters **Description:** from the 231-Z, 234-5Z, and 291-Z Buildings. It is classified as a transuranic contaminated soil

site. Plutonium and americium are the dominant radionuclides present in the ditch. The majority of the plutonium was retained in the ditch sediments and did not flow into the 216-U-10 Pond. A comparison of annual plutonium discharges for the dates when the 216-Z-1 Ditch was active indicates that at least 1.4 Kilograms (3 pounds) of plutonium was released to the 216-Z-1 Ditch. The contamination burden includes 137 curies of Pu-239 and 37 curies of Pu-240.

Previously, in 1959, when the entire ditch was open from its original inlet from the 234-5Z Building (before the upper 526 meters were replaced with a pipeline), a mud sampling project took three samples of the ditch sediment every 100 feet from the inlet pipe to the outlet into 216-U-10 Pond (81 samples from the Z-1D ditch, plus others from 216-U-10 Pond shoreline). The levels of plutonium ranged up to 27.1 micrograms per gram plutonium (almost all plutonium 239) at 800 feet from the inlet. The levels at 485 meters (1600 feet) from the inlet were still at 1.7 micrograms per gram plutonium. The 1959 report concluded that there was between 3 and 10 kilograms of plutonium in the ditch.

Site Code: 216-Z-11 Classification: Accepted

Site Names: 216-Z-11, 216-Z-11 Ditch, Z Plant Ditch ReClassification:

Site Type:DitchStart Date:1959Site Status:InactiveEnd Date:1971

Site The 216-Z-11 ditch is a backfilled, surface stabilized ditch that ran from the east side of the 234-Description: 5Z facility southward to the 216-U-10 Pond. The ditch is currently co-located within a large,

5Z facility southward to the 216-U-10 Pond. The ditch is currently co-located within a large, posted Underground Radioactive Material area that also includes the 216-Z-1D and 216-Z-19 ditches. When active, the unit was a long narrow ditch with 2.5:1 sloped sides and a 0.05% grade.

Waste Type: Process Effluent

Waste The total volume discharged to this ditch is unknown. The ditch received process cooling water **Description:** and steam condensate from the 234-5Z Building, cooling and seal water from the 291-Z Stack,

and steam condensate from the 234-5Z Building, cooling and seal water from the 291-Z Stack, and laboratory waste from 231-Z. It also received storm water from an elevated tank located south to 234-5Z. The site is a transuranic contaminated soil site. During the 1960's, a special Space Nuclear Auxiliary Power program was operating in Z-Plant. The program isolated plutonium-238 and released plutonium 239/240 to the 216-Z-11 ditch as waste. Plutonium and americium were the dominant radionuclides in the effluent discharge. The ditch has been

reported to contain 137 curies of plutonium 239 and 37 curies of plutonium 240.

Site Code: 216-Z-19 Classification: Accepted

Site Names: 216-Z-19, 216-U-10 Ditch, Z Plant Ditch, ReClassification:

216-Z-19 Ditch

Site Type:DitchStart Date:1971Site Status:InactiveEnd Date:1981

Site The 216-Z-19 Ditch is a backfilled, surface stabilized site. The ditch is currently co-located within a large Underground Radioactive Material area that also includes the 216-Z-1D and 216-Z-

11 ditches.

Waste Type: Process Effluent

Waste The unit is considered a transuranic contaminated soil site. The effluents received by this ditch **Description:** include process cooling water, steam condensate, pump seal waste from Plutonium Finishing

Plant, and cooling water from the 231-Z Buildings. The dominant radionuclides present include plutonium, americium, strontium, and cesium. Approximately 60 grams of plutonium was

released to the ditch in March 1976.

Site Code: 216-Z-20 Classification: Accepted

Site Names: 216-Z-20, Z-19 Ditch Replacement Tile **ReClassification:**

Field

Site Type:CribStart Date:1981Site Status:InactiveEnd Date:1995

Site The site is marked and posted as an Underground Radioactive Material area.

Description:

Waste Type: Steam Condensate

Waste The site has received cooling water, steam condensate, storm sewer, building drains, HEDL **Description:** RADTU cooling water, and chemical drains waste from the 234-5Z Building; cooling water

steam condensate and laboratory drains from the 231-Z Building; and miscellaneous drains waste from 291-Z, 232-Z, and 236-Z buildings. The unit also received wastes from 2736-Z Building, (Construction Project B-246). In 1987, 70 gallons per minute of non-radioactive, thermally warm (105 degrees F), water from Z Plant was permanently diverted from the 216-Z-

20 to the 216-Z-21 Seepage Basi

Site Code: UPR-200-W-18 Classification: Accepted

Site Names: UPR-200-W-18, Liquid Release to 216-U-9 ReClassification: Rejected (1/25/2000)

Site Type: Unplanned Release Start Date: 1953

Site Status: Inactive End Date:

Site WIDS site UPR-200-W-18 has been rejected based on documentation that verified it was a **Description:** DUPLICATE of UPR-200-W-139. Other documentation verified that WIDS site UPR-200-W-

139 was located within the boundary of the larger site of 216-U-9 Ditch and has been

139 was located within the boundary of the larger site of 210-0-9 Ditch and has been

consolidated into that site.

Future updates and closeout information will only be added to 216-U-9 Ditch. This site will no

longer be updated.

Waste Type: Soil

Waste The waste was unknown contamination of the 216-U-9 ditch.

Description:

Site Code: UPR-200-W-104 Classification: Accepted

Site Names: UPR-200-W-104, UN-216-W-14, 216-U- ReClassification: Rejected (1/25/2000)

10 Pond Leach Trench, U Pond Fingers

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is historically identified as an unplanned release. The site is posted with "Underground

Description: Radioactive Material" warning signs. The leach trenches were stabilized along with the 216-U-10

Pond. The AC-540 markers at the ends of the trenches are labeled 216-U-10 and URM.

This site has been consolidated with the 216-U-10 Pond.

Waste Type: Process Effluent

Waste A trench was dug to give additional leaching surface for overflow water from the 216-U-10

Description: Pond. There is low-level, beta/gamma and alpha activity in the bottom of the leach trench.

Contaminants of concern include cesium-137, americium-241, cerium-144 and potassium-40.

The Site Was Consolidated With:

Site Code: 216-U-10

Site Names: 216-U-10, U Swamp, 216-U-1, 216-U-10 Pond, 231 Swamp

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-105 Classification: Accepted

Site Names: UPR-200-W-105, UN-216-W-15, 216-U- **ReClassification:** Rejected (1/25/2000)

10 Pond Leach Trench

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site is historically identified as an unplanned release. The site is posted with "Underground

Description: Radioactive Material" warning signs. The leach trenches were stabilized along with the 216-U-10

Pond. The AC-540 markers at the ends of the trenches are labeled 216-U-10 and URM.

This site has been consolidated with the 216-U-10 Pond

Waste Type: Process Effluent

Waste A trench was dug to provide additional leaching surface for overflow water from the 216-U-10

Description: Pond. There is low-level, beta/gamma and alpha activity in the bottom of the leach trench.

Potential contaminants of concern include cesium-137, strontium-89, strontium-90, potassium-

40, and europium-154.

The Site Was Consolidated With:

Site Code: 216-U-10

Site Names: 216-U-10, U Swamp, 216-U-1, 216-U-10 Pond, 231 Swamp

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-106 Classification: Accepted

Site Names: UPR-200-W-106, UN-216-W-16, 216-U- **ReClassification:** Rejected (1/25/2000)

10 Pond Leach Trench

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is historically identified as an unplanned release. The release site is posted with

Description: "Underground Radioactive Material" warning signs. The leach trenches were stabilized along with the 216-U-10 Pond. The AC-540 markers at the ends of the trenches are labeled 216-U-10

and URM.

This site has been consolidated with the 216-U-10 Pond.

Waste Type: Process Effluent

Waste A leach trench was dug to provide additional leaching surface for overflow water from the 216-

Description: U-10 Pond. There is low-level, beta/gamma and alpha activity in the ground surface on the

bottom of the leach trench. Potential contaminants of concern include cesium-137, strontium-

89, strontium-90, and potassium-40.

The Site Was Consolidated With:

Site Code: 216-U-10

Site Names: 216-U-10, U Swamp, 216-U-1, 216-U-10 Pond, 231 Swamp

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-107 Classification: Accepted

Site Names: UPR-200-W-107, UN-216-W-17, 216-U- **ReClassification:** Rejected (1/25/2000)

10 Pond Flood Plain

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1957

Site The site is historically identified as an unplanned release. The release site is a flood plain that

Description: was incorporated into the 216-U-10 Pond stabilization area. The pond is posted with

"Underground Radioactive Material" signs. The flood plain cannot be distinguished from the

backfilled pond.

This site has been consolidated with the 216-U-10 Pond.

Waste Type: Process Effluent

Waste The waste water that inundated the site came from the 216-U-10 Pond which received the waste

Description: water from the 216-U-14 Ditch, the 216-Z-11 Ditch, and cooling water from the 401-SX

Building condensers in the 241-SX Tank Farm. Potential contaminants of concern include

cesium-137, strontium-90, and potassium-40.

The Site Was Consolidated With:

Site Code: 216-U-10

Site Names: 216-U-10, U Swamp, 216-U-1, 216-U-10 Pond, 231 Swamp

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-111 Classification: Accepted

Site Names: UPR-200-W-111, Sludge Trench at 207-U, ReClassification:

UN-216-W-21

Site Type: Unplanned Release Start Date: 1960

Site Status: Inactive End Date:

Site The site is a trench near the south wall of the 207-U South Retention Basin. The site had been posted with "Surface Contamination" signs. In 1997, contaminated soil in the vicinity of the 207-

U Retention Basin was scraped and consolidated around the basin perimeter. The contaminated soil was covered with clean backfill. The radiological posting was changed to "Underground

Radioactive Material."

Waste Type: Sludge

Waste Approximately 21 cubic meters (27 cubic yards) of sludge from the 207-U South Retention

Description: Basin was buried adjacent to the Retention Basin. Until 1972, the retention basins received steam condensate and cooling water from the 224-U Building and chemical sewer waste from

the 221-U Building.

Site Code: UPR-200-W-112 Classification: Accepted

Site Names: UPR-200-W-112, Sludge Trench at 207-U, ReClassification:

UN-216-W-22

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site had been posted with "Surface Contamination" warning signs. In 1997, the contaminated

Description: area in the vicinity of the 207-U Retention Basin was scraped and consolidated. The area was

covered with clean soil and the radiological posting was changed to "Underground Radioactive

Material."

Waste Type: Sludge

Waste Approximately 21 cubic meters (27 cubic yards) of sludge from the 207-U North Retention

Description: Basin was buried adjacent to the north side of the Retention Basin. Until 1972, the retention

basins received steam condensate and cooling water from the 224-U Building and chemical

sewer waste from the 221-U Building.

Site Code: UPR-200-W-139 Classification: Accepted

Site Names: UPR-200-W-139, Liquid Release to the **ReClassification:** Rejected (1/25/2000)

216-U-9 Ditch, UN-200-W-139, UPR-200-

W-18

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1954

Site WIDS site UPR-200-W-139 was located within the boundary of the larger site of 216-U-9 Ditch and has been consolidated into that site. Future updates and closeout information will only be

added to 216-U-9 Ditch. This site will no longer be updated.

The site was an unplanned release into the eastern fork of the 216-U-9 Ditch. The eastern fork of the 216-U-9 Ditch was abandoned in 1954. Currently, the eastern fork of the ditch is not marked or posted. It has no chain barricades or radiation warning signs and is partially backfilled. There are no permanent monuments or other identifiers at the site. The head end of the 216-U-9 Ditch, beginning south of 13th Street, is still an open, dry ditch. There is mature sage brush growing on the side slopes of the open ditch.

Waste Type: Process Effluent

Waste References state the ditch became contaminated in September of 1953 and was backfilled in

Description: spring of 1954. No details of the release are included.

The Site Was Consolidated With:

Site Code: 216-U-9

Site Names: 216-U-9, U Swamp-S Swamp Ditch, 216-U-6

Reason: Within Boundary Of Larger Site

200-IS-1

Site Code: 241-A-151 Classification: Accepted

Site Names: 241-A-151, 241-A-151 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1956

Site Status: Inactive End Date:

Site The site is a reinforced concrete structure with cover blocks. Most of the structure is below grade.

Description: It is marked and radiologically posted.

Waste Type: Process Effluent

Waste The unit transferred process effluents from the PUREX facility to the tank farms. Lead shielding

Description: may also be contained inside the diversion box.

Site Code: 241-A-302A Classification: Accepted

Site Names: 241-A-302A, 241-A-302-A Catch Tank ReClassification:

Site Type: Catch Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit is an underground, cylindrical vessel made of carbon steel. It sits inside a pump pit with

Description: a riser extending to the surface. It is surrounded with posts and chain and marked with

radiological and IMUST signs.

Waste Type: Process Effluent

Waste This unit I collected drainage from the 241-A-151 diversion box. Volumes varied according to specific plant operation. Prior to being pumped out in 1992, the tank contained 13,626 liters

(3,605 gallons) of waste. In 1994, it was reported to contain 5984 liters (1583 gallons) of

effluent. The 1996 report said it contained 6418 liters (1698 gallons) of waste.

Site Code: 241-A-302B Classification: Accepted

Site Names: 241-A-302B, 241-A-302-B Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Catch Tank Start Date:
Site Status: Inactive End Date:

Site The east slope of the 241-A Tank Farm has been sprayed with shotcrete. The shotcrete surrounds

Description: the area where the 241-A-302B Catch Tank is located. A riser and electrical box are visible. A

staircase has been installed to provide access to the tank surface. The underground tank is

positioned horizontally. The tank is marked and radiologically posted.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: Operations to the tank farms. Volumes varied according to specific plant operation. The tank

was isolated in 1985 and stabilized (pumped) in 1990. The volume of waste reported to be

remaining in the tank is not consistent in all documents. The Miscellaneous Underground Radioactive Tanks report (1992) states there is 8581 liters (2270 gallons) of supernate and 3137 liters (830 gallons) of sludge. The Waste Tank Summary Report for April 1996 states there is a total of 18,685 liters (4943 gallons) of waste remaining in the tank.

Site Code: 241-B-154 Classification: Accepted

Site Names: 241-B-154, 241-B-154 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1945Site Status:InactiveEnd Date:1984

Site The site is a diversion box that interconnects diversion boxes 241-B-151 and 241-B-152 with the **Description:** 221-B Building. The unit is a rectangular, reinforced concrete structure. It has been sprayed with

gray, weatherizing foam.

Waste Type: Process Effluent

Waste The diversion box transferred process waste from B Plant to the tank farms It is estimated that the diversion box also may contain approximately 23 kilograms (50 pounds) of lead shielding

inside this unit.

Waste Type: Chemicals

Waste This unit transferred waste from processing and decontamination operations. Volumes of waste **Description:** present in the system varied with production operations. Contamination in this unit is estimated

to include high alpha, beta, and gamma activity levels.

Site Code: 241-B-302B Classification: Accepted

Site Names: 241-B-302B, 241-B-302-B Catch Tank, ReClassification:

241-B-302, IMUST, Inactive

Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1945Site Status:InactiveEnd Date:1985

Site This unit is an underground, horizontal carbon steel tank. The catch tank and the 241-B-154

Description: Diversion Box are surrounded with post and chain. The surface of the area inside the chain has

been covered with grave and sprayed with gray weatherizing material. The site is marked with

radiological and IMUST signs.

Waste Type: Process Effluent

Waste This unit collected leaking and excess waste solutions from processing and decontamination **Description:** operations that passed through the 241-B-154 Diversion Box. Volumes were variable according

to specific plant operation. In 1985, the volume of liquid inside the tank was estimated to be 16,027 liters (4240 gallons). Sludge content was estimated to be 2608 liters (690 gallons).

Site Code: 241-BX-154 Classification: Accepted

Site Names: 241-BX-154, 241-BX-154 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1985

Site This diversion box is a reinforced concrete structure.

Description:

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Waste Type: Equipment

Waste It was estimated that approximately 50 pounds (23 kilograms) of waste lead was stored in this

Description: unit.

Site Code: 241-BX-155 Classification: Accepted

Site Names: 241-BX-155, 241-BX-155 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1948Site Status:InactiveEnd Date:1984

Site This diversion box is a reinforced concrete structure. The diversion box has been isolated and covered with water proof foam sealant. The area around the diversion box has been surface

covered with water proof foam sealant. The area around the diversion box has been surface stabilized with gravel and posted with Underground Radioactive Material signs, except for the surface area above the 241-B-302-C tank. This area does not have the additional layer of gravel

and remains posted as a Contamination Area.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. High levels of beta,

gamma and alpha contamination are estimated to be inside this unit. Lead shielding material may

also be present.

Waste Type: Equipment

Waste It was estimated that approximately 50 pounds (23 kilograms) of waste lead was stored in this

Description: unit.

Site Code: 241-BX-302B Classification: Accepted

Site Names: 241-BX-302B, 241-BX-302-B Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1948Site Status:InactiveEnd Date:1985

Site The buried tank is covered with gravel. It is surrounded with post and chain. The tank is marked

Description: with radiological and IMUST signs.

TT 1 ID TO TO 100 1

Waste Type: Process Ettluent

Waste This unit collected drainage and spilled waste solutions that passed through the 241-BX-154

Diversion Box. Volumes were variable according to specific plant operation. Residual volume **Description:** is estimated to be 3591 liters (950 gallons) of sludge and 355 liters (94 gallons) of supernate.

Site Code: 241-BX-302C **Classification:** Accepted

ReClassification: Site Names: 241-BX-302C, 241-BX-302-C Catch Tank,

> IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Catch Tank **Start Date:** 1948 1985 **Site Status:** Inactive **End Date:**

Site This catch tank is a horizontal cylinder of direct buried carbon steel. It is inside a recently

graveled Underground Radioactive Material area, related to the 241-BX-155 Diversion Box **Description:** surface stabilization. The tank was not covered with extra gravel and is separately posted as a

Contamination Area. The tank is marked with radiological and IMUST signs.

Waste Type: Process Effluent

This unit collected processing and decontamination drainage from the 241-BX-155 Diversion Waste Box. Volumes were variable according to specific plant operation. In 1984, the tank was **Description:**

estimated to contain 2400 liters (635 gallons) of sludge and 862 liters (228 gallons) of supernate.

Site Code: 241-C-154 **Classification:** Accepted

241-C-154, 241-C-154 Diversion Box **Site Names: ReClassification:**

Diversion Box Start Date: 1946 **Site Type: Site Status:** Inactive **End Date:** 1985

The diversion box has been covered with clean backfill material (ash) and is no longer visible. It Site

is located within the larger Hot Semiworks surface stabilized area (200-E-41). **Description:**

Waste Type: Process Effluent

This unit was used to transfer radioactive waste solutions (promethium) from B Plant operations. Waste **Description:**

It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

each diversion box.

Waste Type: Equipment

Waste The diversion boxes are estimated to contain approximately 50 pounds (23 kilograms) of waste

Description: lead.

Site Code: 241-CX-70 Classification: Accepted

Site Names: 241-CX-70, 241-CX-TK-70 Tank, **ReClassification:**

> Strontium Hot Semi-works, IMUST, Inactive Miscellaneous Underground

Storage Tank

Site Type:Storage TankStart Date:1952Site Status:InactiveEnd Date:1957

Site The 241-CX-70 underground tank is surrounded with post and chain. It is posted with Hazardous

Description: Waste, Restricted Area-Inactive Tank signs.

Waste Type: Process Effluent

Waste Description:

The unit was used to store high-level process waste in support of the Semiworks process. Prior to sluicing, the unit contained approximately 1.45 meters (4.75 feet) of sludge, that is roughly equivalent to 39,000 liters (10,300 gallons) of waste. Contaminants included 20 curies of plutonium-239/240; 500 curies of cesium-137; 2,900 curies of strontium-90; 7,080 kilograms (7.8 tons) sodium nitrate; 1,000 kilograms (1.1 tons) sodium nitrite; 1,090 kilograms (1.2 tons) sodium fluoride; 450 kilograms (0.5 tons) aluminum sulfate; and 180 kilograms (0.2 tons) sodium chromate. After sluicing only a small quantity of solids and residual caustic/water remain. The estimated contamination levels for piping and equipment are 3 curies plutonium and 6,000 curies beta/gamma. The residual volume remaining after the tank was sluiced was estimated to be (500 gallons) of liquid and (250 gallons) of solids. Later more liquids and gravel-like solids were removed. The tank was dried and is considered to be empty.

Site Code: 241-CX-71 Classification: Accepted

Site Names: 241-CX-71, 241-CX-TK-71, 241-CX ReClassification:

Neutralization Tank, Strontium Hot Semiworks, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Neutralization TankStart Date:1952Site Status:InactiveEnd Date:1957

Site The underground tank is surrounded with steel posts and chain. It is posted with Hazardous

Description: Waste, Restricted Area-Inactive Tank signs.

Waste Type: Process Effluent

Waste Description:

The tank was used for neutralizing the 201-C process condensate and the coil and condenser cooling water via a limestone layer. It also received process condensates from the Reduction Oxidation (REDOX) and Plutonium Uranium Extraction (PUREX) pilot plant processes, which would include hexone and kerosene solvents. From November 1956 to June 1957, the unit received flush wastes during decontamination. This tank currently contains a bottom layer of sludge and the limestone layer. The remainder of the tank was filled with grout in 1986. In October 1990, a drill was used to collect samples from the bottom of the tank, through the grout. Low concentrations of methyl ethyl ketone, xylene and toluene were measured (7-54 parts per billion). Twenty one parts per million of cyanide was found.

Site Code: 241-CX-72 Classification: Accepted

Site Names: 241-CX-72, 241-CX-TK-72 Vault and ReClassification:

Tank, 241-CX-72 Waste Self Concentrator, Strontium Hot Semi-works, IMUST, Inactive Miscellaneous Underground

Storage Tank

Site Type: Storage Tank Start Date: 1957

Site Status: Inactive End Date: 1976

Site The 241-CX-72 tank is located inside a small building. A cover has been placed over the tank

Description: with radiological postings and Keep Out signs.

Waste Type: Process Effluent

Waste The tank was filled with grout in 1986. Original content information was based on process knowledge. Some solid salt cake, similar to that found in tank farm tanks containing PUREX

waste, is believed to remain inside the tank as well as the grout. Smears taken from an agitator rod (accidentally pulled out of the tank by heavy equipment) found a maximum of 8000 disintegrations per minute alpha and 5800 picocuries of gamma. Core samples were obtained from the tank in 1989. An 3.3 meter (eleven foot) layer of fission products and TRU isotopes was found in the bottom of the tank. Estimated radionucides present include approximately 200

grams of plutonium-239 (as a fluoride compound).

Site Code: 200-E-111 Classification: Accepted

Site Names: 200-E-111, Encased Pipeline From 241-ER- **ReClassification:**

151 Diversion Box to 241-C Tank Farm and 244-AR Vault; 3-38 Encasement

Site Type: Tank Farm Process Piping Start Date:
Site Status: Inactive End Date:

Site The site is an underground piping encasement that contains three 7.5 centimeter (3 inch) diameter **Description:** stainless steel waste transfer pipelines, numbered V108, 8618, 8653, that run from the 241-ER-

151 diversion box through a "Y," which branches to the 241-C Tank Farm and the 244-AR Vault. The section from the "Y" junction to the 244-AR Vault contains two 7.5 centimeter (3 inch) pipelines numbered 809 and 818. There is a posted Contamination Area on top of the line at the

Y Junction where the line branches to the 241-C Tank Farm and the 244-AR Vault.

The entire length of the pipeline is marked with steel fence posts and posted as an Underground Radioactive Materials area. The ground surface above the pipeline is bare in spots, other sections are vegetated with crested wheatgrass, tumbleweeds, and native grass species.

Waste Type: Process Effluent

Site Type:

Waste The pipeline transported liquid effluent from the 241-ER-151 Diversion Box to the tank farms.

Description: Some adjacent soil has been contaminated from pipeline leaks.

Site Code: 200-E-116 Classification: Accepted

Site Names: 200-E-116, Pipelines from 241-B-154 **ReClassification:**

Diversion Box to 241-C-151 and 241-C-152 Diversion Boxes, Encased Pipeline

Tank Farm Process Piping Start Date:

Site Status: Inactive End Date:

Site The pipeline is posted as an "Underground Radioactive Pipeline" that extends from the 241-BDescription: 154 Diversion Box to the 241-C-151 and 241-C-152 Diversion Boxes. Vegetation over the

154 Diversion Box to the 241-C-151 and 241-C-152 Diversion Boxes. Vegetation over the pipeline has been crushed due to vehicle traffic. An area located just north of the 241-B-154 Diversion Box was posted as a High Contamination Area in September 2000, but was covered with a bio-barrier and gravel in February 2001. It is now a rectangular posted URM area over a

portion of the pipeline. Another area of contamination was found on this pipeline in June 2001. This area was covered with gravel and posted as a URM in August 2001.

Waste Type: Process Effluent

Waste The pipeline transported process effluent from B Plant. Some adjacent soil has been

Description: contaminated from pipeline leaks.

Site Code: 241-ER-151 Classification: Accepted

Site Names: 241-ER-151, 241-ER-151 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1945

Site Status: Active End Date:

Site The diversion box is located inside a locked chain link fence. The fence is posted with "Caution -

Description: contact Radiological Control and Tank Farm Shift Office prior to entry" signs. The diversion box

is surrounded with a metal safety barricade.

Waste Type: Process Effluent

Waste The diversion distributes chemical process waste between facilities and tank farms. Quantities **Description:** of waste vary according to specific plant operations. This diversion box facilitates the transfer

of waste vary according to specific plant operations. This diversion box facilitates the transfer of waste solutions between the 200 East Area to the 200 West Areas via the Cross Site Transfer Line. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be

stored in each diversion box.

Site Code: 241-ER-152 Classification: Accepted

Site Names: 241-ER-152, 241-ER-152 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1945

Site Status: Active End Date:

Site Most of the reinforced concrete diversion box structure is underground. The floor and lower

Description: portions of the walls are lined with stainless steel. Cover blocks with lifting hooks are visible

from the surface. The 241-ER-152 Diversion Box is surrounded with radiation rope and

Contamination Area signs.

Waste Type: Process Effluent

Waste The diversion box distributes radioactive waste solutions from between facilities and tank

Description: farms. Quantities are variable according to specific plant operations. This diversion box

facilitates the transfer of low-level waste for the B Plant to the Double-Shell Tank Farms.

Site Code: 241-ER-311 Classification: Accepted

Site Names: 241-ER-311, 241-ER-311 Catch Tank, 241- ReClassification:

ER-311A Replacement Tank

Site Type: Catch Tank Start Date: 1954

Site Status: Active End Date: 1991

Site The underground tank is located inside the 241-ER-151 locked chain link fence. The fence is

Description: posted as a Contamination Area and Underground Radioactive Material Area, and is labeled with

IMUST signs. The placement of these structures within the fence is the 241-ER-311 Catch Tank is the furthest south, nearest the chain link fence. The 241-ER-311A Catch Tank is located adjacent to the north side of the 241-ER-311 tank (in the middle of the three structures). The 241-

ER-151 Diversion Box is north of the 241-ER-311A Catch Tank.

Waste Type: Process Effluent

Waste The catch tank collected drainage and leaks from the 241-ER-151, 241-ER-152 and 241-ER-153

Description: diversion boxes. Volumes are variable according to specific plant operation.

Site Code: 241-ER-311A Classification: Accepted

Site Names: 241-ER-311A, 241-ER-311A Catch Tank, ReClassification:

old 241-ER-311, Original 241-ER-311 Catch Tank, IMUST, Inactive

Miscellaneous Underground Storage Tank

Site Type: Catch Tank Start Date: 1950

Site Status: Inactive End Date: 1954

Site It is located within a chain link fence that is posted as a Contamination Area and Underground **Description:** Radioactive Material Area, and is labeled with IMUST signs. The 241-ER-151 Diversion Box,

the 241-ER-311 Catch Tank and the 241-ER-311A Catch Tank are all located inside this chain link fence. The placement of these structures within the fence is the 241-ER-311 Catch Tank is the furthest south, nearest the chain link fence. The 241-ER-311A Catch Tank is located adjacent to the north side of the 241-ER-311 tank (in the middle of the three structures). The 241-ER-151

Diversion Box is north of the 241-ER-311A Catch Tank.

Waste Type: Process Effluent

Waste The tank received waste from the 241-ER-151 Diversion Box that was caused from leaks and decontamination activities. The tank was abandoned in place in 1954. Although no records

have been found identifying its contents of to verify the tank was pumped, it is unlikely any

significant amount of was remains in the tank.

Site Code: 241-EW-151 Classification: Accepted

Site Names: 241-EW-151, 241-EW-151 Vent Station ReClassification:

Catch Tank, 241-EW-151 Vent Station, Vent Station, 200 Area East-West Vent

Station

Site Type: Catch Tank Start Date: 1955

Site Status: Active End Date:

Site The vent station is enclosed in a locked, chain link fence. It consists of an underground concrete structure containing a stainless steel tank in a vault with a jumper pit above the tank. The tank has

two vent risers that extend above grade and a riser for the unit's leak detection system. At the bottom of the stairwell access is a floor drain that connects to a nearby french drain. Several hazard and radiological warning signs are posted on the fence. There are also two areas, outside the fence, adjacent to the northeast side of the vent station that are posted with Underground

Radioactive Material signs.

Waste Type: Process Effluent

Waste The vent station transports waste solutions from processing and decontamination operations via

Description: the cross-site waste transfer system.

Site Code: 240-S-151 Classification: Accepted

Site Names: 240-S-151, 240-S-151 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1950Site Status:InactiveEnd Date:1987

Site This unit is constructed of reinforced concrete and is rectangular in shape. The 240-S-151

Description: Diversion Box has been weather covered.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and product decontamination **Description:** operations to the tank farms. Volumes were variable according to specific plant operations.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stared in the diversion box.

Site Code: 240-S-152 Classification: Accepted

Site Names: 240-S-152, 240-S-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1977Site Status:InactiveEnd Date:1980

Site This unit is constructed of reinforced concrete and is rectangular in shape. The 240-S-152

Description: Diversion Box has been weather covered.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from 204- S to the 240-S-152 Diversion Box.

Description:

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 240-S-302 Classification: Accepted

Site Names: 240-S-302, 240-S-302 Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1950Site Status:InactiveEnd Date:1987

Site This unit is a horizontal, cylindrical, steel tank. The 240-S-302 Catch Tank is buried underground

Description: to provide shielding from radiation. The tank is surrounded with posts and chain and posted with

radiological and IMUST signs.

Waste Type: Storage Tank

Waste This unit received low-level, dilute laboratory waste and drainage from the 240-S-151 Diversion **Description:** Box. In 1993, the tank was estimated to contain 8603 liters (2276 gallons) of sludge and liquid.

Approximately 378 liters (100 gallons) is suspected to be liquid.

Site Code: 276-S-141 **Classification:** Accepted

Site Names: 276-S-141, 276-S-TK-141, 276-S-306A, **ReClassification:**

> 276-S-141 Solvent Storage Tank, Tank 276-141, Hexone Storage Tank, 244-SX-15, IMUST, Inactive Miscellaneous Underground Storage Tank

Storage Tank **Site Type: Start Date:** 1951 Inactive **End Date:** 1969 **Site Status:**

The site is a below grade carbon steel tank enclosed in a chain line fenced area. The tank is the southernmost tank in a two tank network connected to the 276-S Solvent Handling Facility. The **Description:**

tank had an 89,000 liter (23,575 gallon) capacity. The tank has been filled with cement.

Waste Type: Chemicals

Waste The unit contained radiologically contaminated liquids made up of normal paraffin **Description:** hydrocarbons, hexone, and phosphate tar. In 1992, the 276-S-141 and 276-S-142 each

> contained between 19 to 114 liters (5 to 30 gallons) of 93% normal paraffin hydrocarbons and 7% hexone. They also contained up to 950 liters (250 gallons) of phosphate tar. A nitrogen gas blanket and offgas filtration was implemented in 1990 during the distillation phase. The remaining 19 to 114 liters (5 to 30 gallons) of liquid is expected to be removed by evaporation

over time due to the nitrogen purge process.

Site Code: 276-S-142 **Classification:** Accepted

Site Names: 276-S-142, 276-S-TK-142, 276-S-306B, **ReClassification:**

> 276-S-142 Solvent Storage Tank, Tank 276-142, Hexone Storage Tank, 244-SX-15, IMUST, Inactive Miscellaneous

Underground Storage Tank

Storage Tank **Start Date:** 1951 **Site Type:** 1969

Site Status: Inactive End Date:

Site The site is a below grade carbon steel tank. The tank is the northernmost tank in a two tank **Description:**

network connected to the 276-S Solvent Handling Facility. The tank has a 89,000 liter (23,575

gallon) capacity.

Waste Type: Chemicals

The unit contained radiologically contaminated liquids made up of normal paraffin Waste hydrocarbons, hexone, and phosphate tar. In 1992, 276-S-141 and 216-S-142 contained **Description:**

between 19 to 114 liters (5 to 30 gallons) of 93% normal paraffin hydrocarbons and 7% hexone. They also contain up to 950 liters (250 gallons) of phosphate tar. A nitrogen blanket was added to the tank. The remaining 19 to 114 liters (5 to 30 gallons) of liquid is expected to be removed by evaporation over time due to the nitrogen purge process.

Site Code: 241-SX-302 Classification: Accepted

Site Names: 241-SX-302, 241-SX-302 Catch Tank, SX- ReClassification:

304, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Catch TankStart Date:1954Site Status:InactiveEnd Date:1983

Site The 241-SX-302 Catch Tank an underground, horizontal, cylindrical steel tank. Three yellow

Description: risers are visible on the surface. It is surrounded with post and chain and marked with

radiological and IMUST signs.

Waste Type: Process Effluent

Waste This tank collected excess and leaking waste that transferred through the 241-SX-151 and 241-**Description:** SX-152 Diversion Boxes. In 1993, the tank was estimated to contain 1152 liters (305 gallons) of

liquid supernate and 3969 liters (1050 gallons) of sludge.

Site Code: 241-TX-152 Classification: Accepted

Site Names: 241-TX-152, 241-TX-152 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1949

Site Status: Active End Date:

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. It is surrounded with light posts and chain and is posted with various radiological

postings.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-TX-154 Classification: Accepted

Site Names: 241-TX-154, 241-TX-154 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1949

Site Status: Active End Date:

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. The diversion box is surrounded with post and chain. It is labeled and radiologically

posted. The adjacent area has been covered with shotcrete.

W. ... T. D.... P.C.......

Waste Type: Process Effluent

Waste The unit transports radioactive waste solutions from processing and decontamination

Description: operations. Quantities are variable according to specific plant operations. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-TX-155 Classification: Accepted

Site Names: 241-TX-155, 241-TX-155 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. It is surrounded with light posts and chain and Contamination Area signs.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-TX-302B Classification: Accepted

Site Names: 241-TX-302B, 241-TX-302-B Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1949Site Status:InactiveEnd Date:1982

Site This unit is an underground, cylindrical tank made of steel. The ground surface around the tank has been covered with gravel. The tank is surround with light posts and chain and posted with

Contamination Area and IMUST signs.

Waste Type: Process Effluent

Waste This unit was used for containment of waste solution spills that occurred during transfers from **Description:** processing and decontamination operations. Volumes collected were variable according to

specific plant operations. In 1984, the volume was estimated to be 4989.6 liters (1320 gallons).

A sample from this tank was taken on March 6, 1984. It was reported to have a dose rate of 24

millirad per hour with a pH of 9.95.

Site Code: 241-TX-302BR Classification: Accepted

Site Names: 241-TX-302BR, 241-TX-302BR Catch ReClassification:

Tank, 241-TXR-302BR, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1950Site Status:InactiveEnd Date:1954

Site This unit is an underground, horizontal, cylindrical tank made of steel. The ground surface around

Description: the tank has been covered with gravel. The tank is surrounded with posts and chain and labeled

with IMUST signs.

Waste Type: Process Effluent

Waste The unit was used to transfer of waste solutions from processing and decontamination

Description: operations. No waste volume was available in 1994.

Site Code: 241-TX-302C Classification: Accepted

Site Names: 241-TX-302C, 241-TX-302-C Catch Tank ReClassification:

Site Type: Catch Tank Start Date: 1949

Site Status: Active End Date:

Site This unit is an underground horizontal, cylindrical tank made of carbon steel. The tank area has

Description: been sprayed with shotcrete to control surface contamination.

Waste Type: Process Effluent

Waste This unit is used for transfer of radioactive waste solutions from processing and decontamination

Description: operations at T Plant. Volumes are variable according to specific plant operation.

Site Code: 216-TY-201 Classification: Accepted

Site Names: 216-TY-201, Supernatant Disposal Flush

Tank, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Settling TankStart Date:1953Site Status:InactiveEnd Date:1966

Site The 216-T-26, 216-T-27 and 216-T-28 cribs and the 216-TY-201 Tank are enclosed in a common

Description: area with steel post and chain barricade. The area is posted "Underground Radioactive

Material". The 216-TY-201 flush tank is located in the northeast corner of the area. It has three risers protruding from a mound of earth. The 216-TY-201 tank is delineated with steel post and

ReClassification:

chain and marked with Inactive Miscellaneous Underground Storage Tank signs

Waste Type: Process Effluent

Waste In 1955 and 1956, the 216-TY-201 Flush Tank received scavenged first cycle supernate from **Description:** 221-T after it had cascaded through the 241-TY-101, 241-TY-103, and 241-TY-104 tanks in

241-TY Tank Farm. From 1960 through 1966 the 216-TY-201 Flush Tank received received T Plant steam condensate and process decontamination waste via the 241-T-112 tank in the 241-T Tank Farm. In 1963, 2607-T equipment decontamination waste was added to the waste stream. In 1964, 300 Area laboratory waste was trucked to the 216-T-27 and 216-T-28 cribs and released to the cribs through a riser. The Authorization Basis Status Report (1998) assumes the solid and liquid composition to be the same as those found in tank 241-T-112. Solids are assumed to contain 5110 micrograms per gram (ug/g) aluminum, 28800 ug/g bismuth, 16400 ug/g iron, 41000 ug/g sodium, 395 ug/g lead, 313 ug/g strontium, 3100 ug/g uranium, and 36600

Hanford Site Waste Management Units Report January 2004

ug/g OH. Solid radionuclides are assumed to include 0.184 microcuries per gram (uCi/g) cesium-137, 6.0 uCi/g strontium-90, 5.71 E-04 uCi/g plutonium-138, 0.07 uCi/g plutonium-139 and 1.0 E-04 uCi/g americium-241. The Supernate is expected to contain 9.0 E-06 uCi/g americium-241.

Site Code: 241-U-151 **Classification:** Accepted

Site Names: 241-U-151, 241-U-151 Diversion Box **ReClassification:**

1946 **Site Type:** Diversion Box **Start Date:**

End Date: Site Status: Active

The diversion box is marked and radiologically posted. This unit is constructed of reinforced Site concrete with multiple encased liquid waste transfer lines. The diversion box structure is mostly **Description:**

below ground. It has three layers of cover blocks.

Process Effluent Waste Type:

The unit transports waste solutions from processing and decontamination operations. Quantities Waste are variable according to specific plant operations. Lead shielding may also be contained inside **Description:**

the diversion box.

Site Code: 241-U-152 **Classification:** Accepted

Site Names: 241-U-152, 241-U-152 Diversion Box **ReClassification:**

Site Type: Diversion Box **Start Date:** 1946

Site Status: Active **End Date:**

The diversion box is marked and radiologically posted. The unit is constructed of reinforced Site concrete with multiple encased liquid waste transfer lines. The diversion box structure is mostly **Description:**

below ground. It has three layers of cover blocks.

Process Effluent Waste Type:

Waste The unit transports waste solutions from processing and decontamination operations. Quantities **Description:**

are variable according to specific plant operations. Lead shielding may also be contained inside

the diversion box.

Site Code: 241-UX-154 **Classification:** Accepted

Site Names: 241-UX-154, 241-UX-154 Diversion Box **ReClassification:**

Diversion Box **Start Date:** 1946 **Site Type:**

Site Status: Active **End Date:**

The diversion box is marked and radiologically posted. The unit is mostly below grade, Site

constructed of reinforced concrete. Multiple encased liquid waste transfer lines enter the box **Description:**

through its southeast wall.

Waste Type: Process Effluent Waste The unit transfers waste solutions from processing and decontamination operations via

Description: underground, encased waste lines. Quantities are variable according to specific plant operations.

Lead shielding may also be contained within the structure.

Site Code: 241-UX-302A Classification: Accepted

Site Names: 241-UX-302A, 241-U-302 Catch Tank, ReClassification:

241-UX-302 Catch Tank, 241-UX-302

Site Type:Catch TankStart Date:Site Status:ActiveEnd Date:

Site The catch tank is an underground tank. It is covered with gravel, marked and radiologically

Description: posted.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solution from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. As of August 1995, it

contained 4232 liters (1118 gallons) of waste.

Site Code: 200-W-7 Classification: Accepted

Site Names: 200-W-7, 246-L, 241-S-TK-1, 243S-TK-1, ReClassification:

243-S-TK1, 200-W Personnel

Decontamination Facility Catch Tank, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1978Site Status:InactiveEnd Date:1988

The underground tank is inside a chained area that measures approximately 3 meters by 3 meters **Description:** (9 feet by 9 feet), with three risers extending to the surface. The tank is posted with Inactive

Miscellaneous Underground Storage Tank (IMUST) signs and radiological postings.

Waste Type: Storage Tank

Waste The tank received effluent from the personnel decontamination sink and shower. The tank

Description: contents would include soap, water and low levels of radionuclides.

Site Code: 200-W-16 Classification: Accepted

Site Names: 200-W-16, 292-T Underground Tanks, ReClassification:

IMUST, Inactive Miscellaneous

Underground Storage Tank, 292-TK-1, 292-

TK-2

Site Type:Storage TankStart Date:1944Site Status:InactiveEnd Date:1970

Site Two metal riser pipes extend about 0.5 meters (1.5 feet) above grade near the southeast corner of

Description: the 292-T building addition. Both are capped and one appears to have a pressure relief vent.

These pipes extend from two buried tanks (292-TK-1 and 2). There is a chain link fence

enclosing the area where the tanks are located. The fence is posted with Access Restricted signs. The site is within a chained area posted "Contamination Area".

Waste Type: Storage Tank

Waste Description:

Liquid waste was sent to these underground tanks from the 292-Tbuilding. Early waste consisted of solutions from the off gas monitoring scrubbers. Later waste was associated with experiments involving failure analysis of irradiated fuel rods. Irradiated N Reactor fuel rods were heated in an induction furnace until rupture or failure occurred. The slag that remained in the furnace was dissolved in nitric acid. A solution of dissolved irradiated fuel and nitric acid was discharged to 292-T-1 and 2. The solution was then neutralized with sodium hydroxide. Neutralization likely caused the dissolved metals to precipitate and deposit in tank bottoms.

Dose rate directly above tanks was 2 millirem per hour in 1995.

Reported Date: October 9, 1995

Site Code: 200-W-58 Classification: Accepted

Site Names: 200-W-58, Z-Plant Diversion Box #1 ReClassification:

Site Type: Diversion Box Start Date:
Site Status: Inactive End Date:

Site The concrete lid of the diversion box is visible above ground. The Z-Plant fenced exclusion area

Description: is covered with gravel.

Waste Type: Process Effluent

Waste The diversion box directed the flow of Z Plant process waste to cribs and tile fields located

Description: south of the Z Plant complex.

Site Code: 200-W-59 Classification: Accepted

Site Names: 200-W-59, Z-Plant Diversion Box #2 **ReClassification:**

Site Type:Diversion BoxStart Date:Site Status:InactiveEnd Date:

Site The diversion box is buried with its concrete lid slightly above ground level. The Z-Plant fenced

Description: exclusion area is covered with gravel.

Waste Type: Process Effluent

Waste This diversion box directed the flow of process waste to the 216-Z-12 crib.

Description:

Site Code: 200-W-78 Classification: Accepted

Site Names: 200-W-78; Pipeline Between 241-TX/TY **ReClassification:**

and 241-T Tank Farms, Encased Pipeline

Site Type:Tank Farm Process PipingStart Date:Site Status:InactiveEnd Date:

Site The site is an encased, underground pipeline that runs between the 241-TXR-151 Diversion Box in the 241-TX Tank Farm and the 241-TR-153 Diversion Box in the 241-T Tank Farm. Outside

in the 241-TX Tank Farm and the 241-TR-153 Diversion Box in the 241-T Tank Farm. Outside the tank farm fence, the line is marked with "Radioactive Pipeline" signs. There are several stabilized, individually radiologically posted areas on top of (or adjacent to) this pipeline, near the

east side of the 241-TY Tank Farm perimeter fence.

Waste Type: Process Effluent

Waste The pipeline transported liquid process effluent between the 241-T and 241-TX/TY tank farms.

Description: The contaminated soil and vegetation found above the transfer line was the result of biological

intrusion into underground tank farm transfer lines.

Site Code: 200-W-97 Classification: Accepted

Site Names: 200-W-97, Encased Pipeline from 240-S- **ReClassification:**

151 Diversion Box to 241-S-151 Diversion

Box

Site Type:Tank Farm Process PipingStart Date:Site Status:UnknownEnd Date:

Site The site is an underground, concrete encased pipeline. The surface is marked with Underground **Description:** Radioactive Material - Pipeline signs. Yellow swab risers are located along the pipeline. One

swab riser, near the 204-S facility, has been surrounded with posts and chain and posted with Soil

Contamination Area signs.

Waste Type: Process Effluent

Waste The pipeline transferred REDOX process waste to the 241-S/SX Tank Farm.

Description:

Site Code: 200-W-98 Classification: Accepted

Site Names: 200-W-98, Encased Pipeline from 240-S- **ReClassification:**

151 to 241-U-153 Diversion Box

Site Type:Tank Farm Process PipingStart Date:Site Status:UnknownEnd Date:

Site The site is a cement encased, underground pipeline. The pipeline is marked with Underground

Description: Radioactive Material - Pipeline signs.

Waste Type: Process Effluent

Waste Description:

Site Code: 200-W-99 Classification: Accepted

Site Names: 200-W-99, Encased Pipeline from 241-U- ReClassification:

151 to 241-S-151 Diversion Boxes

Site Type:Tank Farm Process PipingStart Date:Site Status:UnknownEnd Date:

Site The site is a cement encased, underground pipeline. The pipeline is marked with Underground

Description: Radioactive Material - Pipeline signs.

Waste Type: Process Effluent

Waste Description:

Site Code: 200-W-100 Classification: Accepted

Site Names: 200-W-100, Encased Pipeline from 241- **ReClassification:**

UX-154 to 241-SX-152 Diversion Box

Site Type: Tank Farm Process Piping Start Date:
Site Status: Unknown End Date:

Site The site is a cement encased, underground pipeline. The pipeline is marked with Underground

Description: Radioactive Material - Pipeline signs.

Waste Type: Process Effluent

Waste The pipeline transferred U Plant canyon waste to the 241-S/SX Tank Farm via the 241-UX-154

ReClassification:

Description: diversion box.

Site Code: 200-W-105 Classification: Discovery

Site Names: 200-W-105, Encased Transfer Line

Between 241-UX-154 Diversion Box and

241-TX Tank Farm

Site Type:Tank Farm Process PipingStart Date:Site Status:UnknownEnd Date:

Site The site is a cement encased, underground pipeline. The pipeline is marked with Underground

Description: Radioactive Material - Pipeline signs.

Waste Type: Process Effluent

Waste The pipeline transferred waste to the 241-TX Tank Farm.

Description:

Site Code: 241-WR VAULT Classification: Accepted

Site Names: 241-WR VAULT, 241-WR Vault (Tanks - ReClassification:

001 through -009), 241-WR-01 thru 09, 241-WR Diversion Station Vault, 244-WR Vault, 296-U-6 Stack, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Receiving VaultStart Date:1952Site Status:InactiveEnd Date:1976

Site The vault is a below grade, reinforced concrete structure. There are nine compartments arranged

Description: in two rows with a 189,000 liter (50,000 gallon) tank in each compartment. A concrete wall separates the two rows of tanks. In addition to the tanks, the vault contains miscellaneous

agitators, pumps, and valves. It is marked and posted with Underground Radioactive Material

area signs.

An exhaust stack just north of the vault is included in this site. See sub-site description.

Waste Type: Process Effluent

Waste The site waste contains nitric acid, tributyl phosphate, uranyl nitrate hexahydrate from the TBP

Description: process, and thorium nitrate storage . The unit also contains radioactively contaminated

equipment and structures. Approximately 60 curies of beta contamination remains inside the

vault structure.

SubSites:

SubSite Code: 241-WR VAULT:1

SubSite Name: 241-WR VAULT:1, 296-U-6 Stack

Classification: Accepted

ReClassification:

Description: The remaining below grade structure includes a 1.04 meter (3 foot 8 inch) octagonal concrete

foundation extending 1.23 meters (4 feet) below grade, which encases a portion of the 45.72 centimeter (18 inch) stack that extends 0.31 meters below grade. Above grade, a 5.08 centimeter (2 inch) drain pipe exits northwest side of the stack, under the duct, and enters the ground there. A 1.9 centimeter (0.75 inch) drain pipe exits the duct just before meeting the stack, and flows straight down meeting the 5.08 centimeter (2 inch) drain below grade. A 2.54 centimeter (1 inch) fan drain pipe exits the concrete foundation below the fan, above grade. This pipe enters the ground there and joins the 5.08 centimeter pipe to a 60.96 centimeter (24 inch) dry well. The above grade structures have been demolished.

The 3.81 centimeter (18 inch), carbon-steel, 296-U-6 vault exhaust stack was mounted on a 1.04 meter (3 foot 8 inch) octagonal concrete foundation. The stack reached 14.63 meters (48 feet) above grade level. The stack was used to discharge unfiltered ventilation air from the

storage of UNH for feed to 221-U, then from HNO3 storage, and lastly from thorium storage.

SubSite Code: 241-WR VAULT:2

SubSite Name: 241-WR VAULT:2, 296-U-6 Dry Well

Classification: Accepted

ReClassification:

Description: A 5.08 centimeter (2 inch) drain pipe runs from the north side of the concrete stack

foundation, southeast to a 60.96 centimeter (24inch) dry well. The exact location of the dry

well is not known, as it is southeast of the stack.

Site Code: 241-Z Classification: Accepted

Site Names: 241-Z, 241-Z Treatment and Storage **ReClassification:**

Tanks, 241-Z Tank Farm, 241-Z Treatment and Storage System, 241-Z-D-4, 241-Z-D-5, 241-Z-D-7, 241-Z-D-8, 241-Z Sump,

241-Z Tank Pit

Site Type: Neutralization Tank Start Date: 1948

Site Status: Active End Date:

Site Description:

Site consists of an above ground, weather protected area (metal building) containing controls and monitoring systems for the below grade concrete vault containing four storage and treatment tanks. The operating capacity of the tank system is 17,000 gallons (65,000 liters). The site was activated on November 24, 1948. The RCRA TSD consists of the tanks (excluding D-6), the internal piping, the concrete vaults, ancillary equipment and the soil directly below the tanks. Pipelines leading from buildings in 234-5Z to the 241-Z facility are not considered part of this site.

Waste Type: Process Effluent

Waste Description:

The unit receives waste from 234-5Z. Before treatment, the waste is corrosive (less than pH 2.0) containing predominately nitric acid. Additional constituents known to be present include chromium, lead, aluminum nitrate, aluminum fluoride, and lower concentrations of potassium hydroxide, potassium fluoride, magnesium nitrate, ferric nitrate, calcium nitrate, and other trace metal ions. Treatment occurs in a batch process consisting of the addition of sodium hydroxide, ferric nitrate and sodium nitrate. Batch discharges have averaged 125 gallons per week from 1991 to 1994. No discharges were made during 1995.

Site Code: 600-269 Classification: Accepted

Site Names: 600-269, Cross Site Transfer Line **ReClassification:**

Replacement, New Cross-Site Transfer Line

Site Type: Tank Farm Process Piping Start Date: 1995

Site Status: Active End Date:

Site The site is an underground pipeline. It is marked on the surface with Underground Radioactive

Description: Material - Pipeline signs. An associated diversion box, Diversion Box 6241-A, is located east of

Beloit Ave. in 200 West Area. An associated vent station, Vent Station 6241-V, is located

between 200 East and West areas, northwest of the 241-EW-151 Vent Station.

Waste Type: Process Effluent

Waste The underground encased line transfers tank farm liquid waste between 200 West Area and 200

Description: East Area.

Site Code: HSVP Classification: Accepted

Site Names: HSVP, Hot Semiworks Valve Pit, 201-C **ReClassification:**

Diversion Box, Semiworks Valve Pit

Site Type:Valve PitStart Date:1951Site Status:InactiveEnd Date:1986

Site The site is a sealed, concrete-filled, vertically configured, stainless-steel cylinder that is buried beneath the ash barrier which was placed over the decommissioned 201-C Process Building (see

200-E-41). The surface stabilized area is posted with Underground Radioactive Material signs.

The valve pit is not separately marked or posted.

Waste Type: Process Effluent

Waste This site has been decommissioned. During operation, this valve pit routed pilot REDOX

Description: wastes, pilot PUREX wastes, and wastes from strontium recovery efforts to tank farm facilities.

It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

each diversion box.

Site Code: UPR-200-E-1 Classification: Accepted

Site Names: UPR-200-E-1, Waste Line Failure on South **ReClassification:**

Side of 221-B

Site Type:Unplanned ReleaseStart Date:1946Site Status:InactiveEnd Date:1946

Site The unplanned release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The original line break (metal waste line) had dose rates up to 400 rad per hour.

Description:

Site Code: UPR-200-E-3 Classification: Accepted

Site Names: UPR-200-E-3, Line leak from 221-B to 241- ReClassification:

BX-154, UN-200-E-3

Site Type: Unplanned Release Start Date: 1951

Site Status: Inactive End Date:

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of B Plant first cycle waste with dose rates up to 120 rad per hour at a

Description: distance of 0.4 meters (1.5 feet).

Site Code: UPR-200-E-25 Classification: Accepted

Site Names: UPR-200-E-25, Contamination Spread **ReClassification:**

from the 241-A-151 Diversion Box, UN-

200-E-25

Site Type: Unplanned Release Start Date: 1960

Site Status: Inactive End Date:

Site The release is not separately marked or posted. The area south of PUREX, inside the facility

Description: fence had been posted as a Contamination Area. In 1999, the large posted Contamination Area

was covered with clean backfill and changed to an Underground Radioactive Material Area (200-

E-103). It is possible this release contributed to the contamination in the area.

Waste Type: Steam Condensate

Waste Steam rising from the diversion box caused a spread of beta/gamma (specks) with readings up to

Description: 100,000 counts per minute per particle. The average ground deposition (specks) was

approximately five particles per 9.3 square meters (100 square feet).

Site Code: UPR-200-E-26 Classification: Accepted

Site Names: UPR-200-E-26, 241-A-151 Release, UN- ReClassification:

200-E-26

Site Type: Unplanned Release Start Date: 1960

Site Status: Inactive End Date:

Site The release is not separately marked or posted. The area south of PUREX, inside the facility

Description: fence had been posted as a Contamination Area. In 1999, the large posted Contamination Area on

the south side of PUREX was covered with clean backfill and changed to an Underground Radioactive Material Area (200-E-103). It is possible this release contributed to the

contamination in the area.

Waste Type: Steam Condensate

Waste A cloud of contaminated steam escaped from a faulty connection inside the diversion box.

Description: Beta/gamma contamination (specks) with readings ranging from 1 to 3 millirads per hour were

found near the diversion box. The general contamination levels on surfaces further away averaged 3,000 counts per minute. The waste line being tested was used for routing PUREX

strontium interim storage to 244-CR vault.

Site Code: UPR-200-E-31 Classification: Accepted

Site Names: UPR-200-E-31, 241-A-151 Release, UN- ReClassification:

200-E-31

Site Type: Unplanned Release Start Date: 1961

Site Status: Inactive End Date:

Site The release is not separately marked or posted. The area south of PUREX, inside the facility **Description:** fence had been posted as a Contamination Area. In 1999, the large posted Contamination Area,

located on the south side of PUREX, was covered with clean backfill and changed to an

Underground Radioactive Material Area (200-E-103). It is possible this release contributed to the

contamination in the area.

Waste Type: Steam Condensate

Waste Steam rising from the 241-A-151 Diversion Box resulted in a spread of beta/gamma

Description: contamination (specks) with readings ranging from 40,000 to 100,000 counts per minute in the

vicinity of PUREX. Readings on surfaces outside of the limited area fence decreased to 1,000 counts per minute. The diversion box provided routing for high level waste from the PUREX F

and G cells to the tank farms.

Site Code: UPR-200-E-41 Classification: Accepted

Site Names: UPR-200-E-41, UN-200-E-41 Soil ReClassification:

Contamination in the Vicinity of R-13 Stairwell (221-B), UPR-200-E-85

Site Type: Unplanned Release Start Date: 1972

Site Status: Inactive End Date:

*This is a DUPLICATE of UPR-200-E-85.

Description:

Waste Type: Process Effluent

Waste **Description:** An estimated 30 curies of cesium-137 with readings of 12.5 rad per hour was released to the soil around the pipeline that carried tank 18-1 waste. Half of the cesium released was removed with

the soil excavated to expose the line leak.

Site Code: UPR-200-E-42 **Classification:** Accepted

1972

Site Names: UPR-200-E-42, 241-AX-151 Release, UN-

ReClassification:

200-E-42

Unplanned Release **Site Type:**

Site Status: Inactive **Start Date:**

End Date:

Site

The unplanned release site in not currently marked or posted.

Description:

Waste Type: Soil

Waste **Description:** The contamination spread consisted of specks with beta/gamma levels ranging 300 millirad per hour at the diversion box and from 300 to 3,000 counts per minute found on asphalt and soil

surfaces in the vicinity of the 241-AX-151 diversion box. The 241-AX-151 diversion box routed

waste from PUREX to the 244-AR Vault and to the 241-AY and 241-AZ Tank Farms.

Site Code: UPR-200-E-44 **Classification:** Accepted

1972

Site Names: UPR-200-E-44, UN-200-E-44, BCS Waste

Line Leak South of 221-B

ReClassification:

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Site The release site is not separately marked or posted. There is no visual evidence of the area that **Description:**

caved in.

Waste Type: Process Effluent

Waste

The leaking effluent from the BCS crib line caused the ground to cave in. The dirt was

Description: contaminated with readings of 10,000 to 20,000 counts per minute. The pipe was contaminated

with readings up to 20 millirem per hour.

Site Code: UPR-200-E-45 **Classification:** Accepted

Site Names: UPR-200-E-45, UN-200-E-45,

ReClassification:

Contamination Spread from the 241-B-154

Diversion Box

Site Type: Unplanned Release

Inactive

1974 **Start Date:**

End Date: 1974

Site Status: Site

A large area on the northeast corner of 7th Street and Baltimore Avenue is surrounded with post

and chain and marked as an Underground Radioactive Material (URM) area. The URM **Description:**

surrounds the 241-B-154 Diversion Box, that has been covered with a coating of gray grout. The

original Unplanned Release is not separately marked or posted.

Waste Type: Process Effluent Waste Description:

Loose, dried, contamination particles (specks) were spread from the inside of the diversion box

to the ground in the vicinity of 7th and Baltimore. The contamination spread included

beta/gamma readings up to 50,000 counts per minute on the soil surface.

Site Code: UPR-200-E-65

Classification: Rejected (Proposed)

Site Names:

Site Status:

UPR-200-E-65, UN-216-E-65, 241-A-151

ReClassification:

Diversion Box Radioactive Contamination,

UN-200-E-65

Site Type: Unplanned Release

Inactive

Start Date: 1982

End Date: 1982

Site

The release is not separately marked or posted. The area south of PUREX, including this release

Description: site, is posted as an Underground Radioactive Material Area (site 200-E-103).

Waste Type: Soil

Waste

The release consisted of spotty beta/gamma contamination (specks) on the ground with readings

Description: ranging from 600 to 10,000 counts per minute.

Site Code: UPR-200-E-67

Classification: Rejected (Proposed)

1984

Site Names: UPR-200-E-67, UN-216-E-67, Excavation

of Radioactively Contaminated Pipe

Encasement, UN-200-E-67

ReClassification:

Unplanned Release Start Date:

Site Status: Inactive End Date: 1984

Description:

Site Type:

The 1984 excavation has been backfilled. The site is no longer marked or posted.

Description.

Waste Type: Misc. Trash and Debris

Waste The contamination leve

The contamination levels consisted of beta/gamma readings ranging from 1,000 to 1,500

Description: milliard per hour on the excavated pipe.

Site Code: UPR-200-E-77

Classification: Accepted

Site Names: UPR-200-E-77, UN-216-E-5, 241-B-154

Diversion Box Ground Contamination, UN-

ReClassification:

200-E-77

Site Type: Unplanned Release

Start Date: 1946

Site Status: Inactive End Date:

Site Description:

A large graveled area on the northeast corner of 7th Street and Baltimore Avenue is surrounded with post and chain and marked as an Underground Radioactive Material (URM) area. The URM

surrounds the 241-B-154 Diversion Box, which has been covered with a coating of gray grout. The area appears to have been posted in stages. A large posted oval area (URM) extends north and east from the diversion box. Another posted area (URM) extends west to Baltimore Ave. and turns northward. In January 2000, a separate Contamination Area was posted around a power pole (adjacent to a manhole) within the larger URM. In 2002, the posting around the power pole

was removed and a Fixed Contamination Area sign was attached to the pole.

Waste Type: Process Effluent

Waste The original release involved metal waste solution from 221-B with fission products measuring approximately 1 curie. A radiological survey of the area done in October 1975 found surface **Description:**

contamination up to 80,000 counts per minute.

Site Code: UPR-200-E-78 **Classification:** Accepted

Site Names: UPR-200-E-78, UN-216-E-6, 241-BX-155 **ReClassification:**

Diversion Box ground contamination, UN-

200-E-78

Site Type: Unplanned Release **Start Date:** 1955

Site Status: Inactive **End Date:**

The diversion box has been isolated and covered with gray grout. The area around the diversion Site

box and the surface area above the 241-B-302-C tank have been surface stabilized with gravel and **Description:**

posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The release included salt waste from B Plant containing approximately 10 curies of mixed **Description:**

fission product. The maximum dose rate was 22.6 rad per hour at the surface of the spill site

(241-B-155 Diversion Box) in 1955.

Site Code: UPR-200-E-80 **Classification:** Accepted

Site Names: UPR-200-E-80, UN-216-E-8, 221-B R-3 **ReClassification:**

Line Break, R-3 Radiation Zone, UN-200-

E-80

Site Type: Unplanned Release **Start Date:** 1946 **Site Status:** Inactive **End Date:** 1946

The unplanned release is not separately marked or posted. Site

Description:

Waste Type: Process Effluent

The release consisted of approximately of 10 curies of fission products from the "metal waste" Waste

Description: pipe line.

Site Code: UPR-200-E-84 **Classification:** Accepted

UPR-200-E-84,241-ER-151 Catch Tank **ReClassification: Site Names:**

Leak, UN-200-E-84, UN-216-E-12

Start Date: 1953 **Site Type:** Unplanned Release Site Status: Inactive End Date: 1953

The 241-ER-151 Diversion Box and the 241-ER-311 Catch tank are located inside a chain link

Description: fence that is radiologically posted. The release is not separately marked or posted. Waste Type: Process Effluent

Waste The release consisted of contaminated acid with approximately 10 curies of fission products

Description: from the 241-ER-311 Catch Tank.

Site Code: UPR-200-E-85 Classification: Accepted

Site Names: UPR-200-E-85, Line Leak at 221-B

Stairwell R-13, UN-216-E-13, UPR-200-E-

41, UN-200-E-85, UN-200-E-41

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site The site was stabilized in 1984 and posted with Underground Radioactive Material signs. The

Description: release site is not labeled. The R-13 Utility Pit was covered with a steel lid.

Waste Type: Process Effluent

Waste The waste line contained ion exchange waste from tank 18-1, located inside the B Plant canyon.

Description: Soil samples collected in 1972 found the release was predominantly cesium-137.

Approximately 30 curies of cesium was released, but half of the release was removed with the

ReClassification:

soil excavated to expose the line leak.

Site Code: UPR-200-E-87 Classification: Accepted

Site Names: UPR-200-E-87, UN-216-E-15, 224-B ReClassification:

South Side Plutonium Ground

Contamination, UN-200-E-87, 216-E-15

Site Type:Unplanned ReleaseStart Date:1945Site Status:InactiveEnd Date:1953

Site Some areas on the south side of 224-B are posted with Underground Radioactive Material signs.

Description: The release site is not specifically marked.

Waste Type: Process Effluent

Waste Approximately 75 grams (3 ounces) of plutonium-239 may have leaked into the soil at 224-B, based on an actual excavation that found contaminated soil at 224-T in 200 West Area.

Site Code: UPR-200-E-96 Classification: Accepted

Site Names: UPR-200-E-96, Ground Contamination SE **ReClassification:**

of PUREX, UN-216-E-24, UN-200-E-96

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site was described in 1980 as an area measuring approximately 1.0 hectare (2.5 acres) located

Description: adjacent to the east and south sides of 202-A (PUREX). These areas are now covered with gravel

and posted as Underground Radioactive Material areas.

Waste Tyne Process Effluent

vaste type. Trocess Emiliani

Waste The release consisted of low-level radioactive particles resulting from PUREX operations, most

Description: likely fall out from the 291-A stack and diversion box activities.

Site Code: UPR-200-E-117 Classification: Accepted

Site Names: UPR-200-E-117, Contaminated Liquid

Spill, UN-200-E-117

Site Type: Unplanned Release Start Date: 1972

Site Status: Inactive End Date:

Site The release was identified above an encased waste line on the south of PUREX and west of the

Description: railroad tunnel. The release site is no longer marked or posted. The release site is within a larger

ReClassification:

area that was surface stabilized in 1999, known as 200-E-103.

Waste Type: Process Effluent

Waste Dose rates following the release were 2 rad per hour including 500 millirad per hour at 0.3

Description: meters (1 foot) from the liquid. Mud samples taken at the point where the leak occurred showed

primarily cesium and strontium with little evidence of short-lived radionuclides.

Site Code: UPR-200-W-2 Classification: Accepted

Site Names: UPR-200-W-2, UN-200-W-2, ReClassification:

Underground Waste Line Leak

Site Type: Unplanned Release Start Date: 1947

Site Status: Inactive End Date:

Site The area around stairwell R-19 at the 221-T facility is currently paved with asphalt. A long,

Description: narrow Underground Radioactive Material area is posted around the R-19 area.

Waste Type: Process Effluent

Waste Hydrostatic tests showed that the 9-1 "metal waste line" had failed and discharged liquid waste

Description: to ground. No quantity or physical description of waste in references.

Site Code: UPR-200-W-5 Classification: Accepted

Site Names: UPR-200-W-5, Overflow at 241-TX-155, **ReClassification:**

UN-200-W-5

Site Type:Unplanned ReleaseStart Date:1950Site Status:InactiveEnd Date:1950

Site The unplanned release is no longer marked or separately posted. In 2000 and 2001 multiple areas

Description: of soil and vegetation contamination were identified and all were posted. For consolidation

purposes, all of the new Contamination Areas were recorded and mapped as UPR-200-W-113.

Waste Type: Process Effluent

Waste The diversion box contained tank farm waste. No volume was recorded for the overflow.

Description:

Site Code: UPR-200-W-6 Classification: Accepted

Site Names: UPR-200-W-6, UN-200-W-6, ReClassification:

Contamination Spread from 241-U-151 and

241-U-152 Diversion Boxes

Site Type: Unplanned Release Start Date: 1950

Site Status: Inactive End Date:

Site The ground around the 241-U-151 and the 241-U-152 Diversion Boxes has been covered with gravel. The diversion boxes are marked and posted but the unplanned release is not separately

identified.

Waste Type: Process Effluent

Waste While working in the 241-U-151 and 241-U-152 Diversion Boxes, loose particulate beta/gamma

Description: contamination, with a maximum dose rate of 20 millirads per hour, spread to the soil

surrounding the diversion boxes.

Site Code: UPR-200-W-21 Classification: Accepted

Site Names: UPR-200-W-21, UN-200-W-21, UN-216- ReClassification:

W-36, Process Line Cave-in at 241-TX-154

Diversion Box

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site The release affected an area between 221-T and 222-T. This area is currently covered with

Description: shotcrete and posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The release consisted of T Plant process waste with a maximum dose rate of 25 rad per hour at a

Description: distance of 20 centimeters (8 inches).

Site Code: UPR-200-W-27 Classification: Accepted

Site Names: UPR-200-W-27, Transfer Line Leak at **ReClassification:**

23rd and Camden, UN-200-W-27, UN-216-

W-5, Duplicate of UPR-200-W-29

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site This is a DUPLICATE of UPR-200-W-29, which occurred on November 15, 1954 at the corner

Description: of 23rd and Camden Avenue. This sitecode is scheduled to be reclassified to be rejected.

Waste Type: Process Effluent

Waste The release was approximately 3800 liters (1000 gallons) of first-cycle process waste from T

Description: Plant. (This is a duplicate of UPR-200-W-29)

The Site Was Consolidated With:

Site Code: UPR-200-W-29

Site Names: UPR-200-W-29, Transfer Line Leak, UN-200-W-29, UPR-200-W-27, UN-200-W-27, UN-216-

W-5, 23rd and Camden Line Break

Reason: Duplicate Site

Site Code: UPR-200-W-28 Classification: Accepted

Site Names: UPR-200-W-28, Release from 241-TX-155 ReClassification:

Diversion Box, UN-200-W-28

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site The unplanned release site is not separately marked or posted. The documented contaminated

Description: area was found at the 241-TX-155 diversion box. There is a large posted Underground

Radioactive Material area west of the diversion box and several smaller radiologically posted areas in this vicinity (see UPR-200-W-113 and UPR-200-W-135). The diversion box has been isolated and weather covered and is marked and posted with various radiological control signs.

Waste Type: Process Effluent

Waste Multiple releases from the 241-TX-155 Diversion Box and its associated underground pipelines

Description: has resulted in contamination being found in the soil in this vicinity. The contaminated area

reference in HW-60807 was given an Unplanned Release number. However, the reference is

describing an area where several release events occurred and not a particular event.

Site Code: UPR-200-W-29 Classification: Accepted

Site Names: UPR-200-W-29, Transfer Line Leak, UN- ReClassification:

200-W-29, UPR-200-W-27, UN-200-W-27, UN-216-W-5, 23rd and Camden Line

Break

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site The area is currently surrounded with steel posts, covered with gravel and posted as an

Description: Underground Radioactive Material Area.

Waste Type: Process Effluent

Waste The release consisted of first-cycle supernatant containing rare earth metals plus yttrium, cesium,

Description: antimony, cerium, ruthenium, niobium, and tellurium. Dose rates up to 11.5 rad per hour at 5

centimeters (2 inches), including 3.5 rad per hour, was measured over the run-off and fields up to 4.5 rad per hour at a distance of 0.9 meters (3 feet) near the cave-in was found. Less than

3,800 liters (1,000 gallons) of waste were estimated to have escaped from the line.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-27

Site Names: UPR-200-W-27, Transfer Line Leak at 23rd and Camden, UN-200-W-27, UN-216-W-5,

Duplicate of UPR-200-W-29

Reason: Duplicate Site

Site Code: UPR-200-W-32 Classification: Accepted

Site Names: UPR-200-W-32, UNH Transfer Line ReClassification:

Break, UN-200-W-32

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site The release site is not currently marked or posted. The above ground pipeline has been removed.

Description:

Waste Type: Chemicals

Waste Soil contamination occurred when an unknown amount of uranyl nitrate hexahydrate (UNH)

Description: solution leaked from a leak in an above ground pipeline.

Site Code: UPR-200-W-33 Classification: Accepted

Site Names: UPR-200-W-33, Ground Contamination at ReClassification:

224-U, UN-200-W-33

Site Type: Unplanned Release Start Date: 1955

Site Status: Inactive End Date:

Site The release site occurred inside the fenced 224-U facility boundary. The site is no longer marked

Description: or posted.

Waste Type: Process Effluent

Waste A leaking flange in the C-5 condensate line at the 224-U building caused an area of ground

Description: contamination measuring approximately 0.9 meters by 0.9 meters (3 foot by 3 foot).

Site Code: UPR-200-W-35 Classification: Accepted

Site Names: UPR-200-W-35, Ground Contamination **ReClassification:**

Near UNH Process Line, UN-200-W-35, REDOX to 224-U UNH Line Leak

REDOM to 22 1 C CIVII Eme Beak

Site Type: Unplanned Release Start Date: 1955

Site Status: Inactive End Date:

Site Much of the area north of REDOX has been surface stabilized. The unplanned release site is not

Description: marked or posted.

Waste Type: Chemicals

Waste The waste is described as an unknown amount and concentration/activity of uranyl nitrate

Description: hexahydrate (UNH) solution being routed from the Reduction Oxidation (REDOX) facility to

the U Plant.

Site Code: UPR-200-W-38 Classification: Rejected (Proposed)

Site Names: UPR-200-W-38, Line Break at 241-TX- ReClassification:

302C, UPR-200-W-160, UPR-200-W-40,

UN-200-W-38, 216-T-30

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1955

Site The area around the 241-TX-154 diversion box and the catch tank has been stabilized with

Description: sprayed concrete (shotcrete). The area is posted with Underground Radioactive Material signs,

but the unplanned release is specifically not marked.

Waste Type: Process Effluent

Waste The 1955 release of liquid metal waste produced beta/gamma with a dose rate of 100 rad per **Description:** hour at a distance of 1 foot (0.3 meters) above the contamination pool. Several thousand gallons

of waste was lost to the ground. HW-60807 estimated the release to be 7520 liters (2000 gallons) RHO-CD-673 estimated 19,000 liters (5026 gallons). The waste was high in salt and is neutral to basic. The initial surface pool of liquid was estimated to be 9 meters (30 feet) by 4.5

meters (15 feet).

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-40

Site Names: UPR-200-W-40, Line Break near 241-TX-154, UPR-200-W-38, UPR-200-W-160, 216-T-30,

UN-200-W-40,

Reason: Duplicate Site

Site Code: UPR-200-W-160

Site Names: UPR-200-W-160, Line Break at 241-TX-302C, UPR-200-W-38, UPR-200-W-40, 216-T-30

Reason: Duplicate Site

Site Code: UPR-200-W-40 Classification: Rejected (Proposed)

Site Names: UPR-200-W-40, Line Break near 241-TX- **ReClassification:**

154, UPR-200-W-38, UPR-200-W-160,

216-T-30, UN-200-W-40,

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1955

Site This site code is recommended for deletion because it is a duplicate of UPR-200-W-38 and UPR-Description: 200-W-160. UPR-200-W-38 has been selected to be the 'surviving' site code for this incident.

Waste Type: Process Effluent

Waste Several thousand gallons of primarily metal waste and rainwater. RHO-CD-673 estimated 19,000 liters (5026 gallons). Other reference documents estimated 7520 liters (2000 gallons).

The waste was high in salt and is neutral to basic. High beta/gamma levels were recorded, up to

100 rads/hour at 0.3 meters (1 foot) above the liquid.

The Site Was Consolidated With:

Site Code: UPR-200-W-38

Site Names: UPR-200-W-38, Line Break at 241-TX-302C, UPR-200-W-160, UPR-200-W-40, UN-200-W-

38, 216-T-30

Reason: Duplicate Site

Site Code: UPR-200-W-49 Classification: Accepted

Site Names: UPR-200-W-49, Contamination Southeast ReClassification: Rejected (Consolidation) (6/13/

of 241-SX, UN-200-W-49

Site Type: Unplanned Release Start Date: 1958

Site Status: Inactive End Date:

Site The 241-SX Tank Farm is currently surrounded with a chain link fence posted with various

Description: radiological warning signs. The unplanned release located outside the tank farm fence, as

described in 1958, is not marked or posted.

Waste Type: Process Effluent

Waste Soil specks (particulates) with beta/gamma readings up to 150 millirads per hour and a single

Description: spot up to 10 rad per hour from the 241-SX-111 and 241-SX-113 tanks were found inside the

tank farm and blown beyond the fence by the wind.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-64 Classification: Accepted

Site Names: UPR-200-W-64, Road Contamination at ReClassification:

23rd and Camden, UN-200-W-64

Site Type: Unplanned Release Start Date: 1969

Site Status: Inactive End Date:

Site The corner of 23rd and Camden has been stabilized with clean gravel due to two waste line leak

Description: events. The stabilized area is surrounded with chain and posted with Underground Radioactive

Material signs. The road shoulders are not posted. This Unplanned Release site is not separately

marked or posted from the stabilized UPR-200-W-29 and UPR-200-W-97 release sites.

Waste Type: Process Effluent

Waste Mud samples collected in 1969 contained mostly cesium-137, with readings up to 600 counts

Description: per minute. No volume estimate was provide. The contamination source appears to be rain water

run off from the adjacent area where two process line leaks occurred (see UPR-200-W-29 and UPR-200-W-97). The line leaks included first-cycle supernatant containing rare earth metals

plus yttrium, cesium, antimony, cerium, ruthenium, niobium, and tellurium.

Site Code: UPR-200-W-79 Classification: Accepted

Site Names: UPR-200-W-79, Contamination Spread at **ReClassification:**

241-Z, UN-200-W-79

1978 **Site Type:** Unplanned Release **Start Date:**

End Date: **Site Status:** Inactive

Site Alpha contamination was spread inside and outside of the 241-Z Sump radiation zone fence. The

Description: area was decontaminated and is no longer marked or posted. It occurred in the graveled and

concrete area around the 241-Z Building.

Waste Type: Process Effluent

Waste Alpha contamination with readings from 500 to 2,000 disintegrations per minute was detected

behind the 241-Z "D-8" sample cabinet. Alpha contamination in excess of 40,000 **Description:**

disintegrations per minute was detected on the pH line, concrete pad, soil and steam line.

Site Code: UPR-200-W-97 **Classification:** Accepted

Site Names: UPR-200-W-97, Transfer Line Leak, UN-**ReClassification:**

216-W-5, UN-200-W-97

1966 Unplanned Release **Start Date:** Site Type: Inactive **End Date:** 1966 **Site Status:**

The site is located at the corner of 23rd Street and Camden Ave. It is marked and posted as Site "Underground Radioactive Material". The release site was stabilized with clean soil, sand, **Description:**

ureabore herbicide, and crushed rock.

Waste Type: Process Effluent

Waste The waste released to the soil consisted of a high salt, neutral to basic liquid tank waste solution **Description:**

containing approximately 10 curies of fission products. The waste consisted of second cycle

bismuth phosphate waste from the 241-T-107 tank. The maximum surface dose rate was 5 rad

per hour beta/gamma with 3 rad per hour being gamma radiation.

Site Code: UPR-200-W-98 **Classification:** Accepted

UPR-200-W-98, UN-216-W-6, 221-T **Site Names: ReClassification:**

Waste Line Break at R-19, UN-200-W-98

Unplanned Release 1945 Site Type: **Start Date: Site Status:** Inactive **End Date:** 1945

The area around door R-19 is paved with asphalt and posted as an Underground Radioactive Material area. There is not a sign that specifically marks the area as an unplanned release site. **Description:**

Waste Type: Process Effluent

A broken underground process transfer line caused contaminated liquid to surface near R-19 at Waste

221-T. The "metal waste" line contained approximately 10 curies of high salt, neutral to basic **Description:**

fission products with a maximum dose rate of 20 rad per hour at 2 inches (5 centimeters).

Site Code: UPR-200-W-102 **Classification:** Accepted

UPR-200-W-102, UN-216-W-12, UN-200-**ReClassification: Site Names:**

W-102, 224-T Underground Line Leak

Site Type: Unplanned Release **Start Date:** 1972 **Site Status:** Inactive **End Date:** 1972

The east and south sides of the 224-T Building are covered with gravel. The area along the east Site

Description: side of the 224-T building is posted as an Underground Radioactive Material area.

Waste Type: Process Effluent

The release consisted of alpha-laden moisture from process tank lines that contaminated the soil Waste

around the pipeline. An estimated 72 grams of plutonium was contained in the contaminated **Description:**

soil that was removed when the leak was discovered.

Site Code: UPR-200-W-113 **Classification:** Accepted

UPR-200-W-113, Soil Contamination East **ReClassification: Site Names:**

of 241-TX, UN-216-W-23, Contamination Areas Around 241-TX-155 Diversion Box,

UN-200-W-113

Start Date: 1977 **Site Type:** Unplanned Release

Site Status: Inactive End Date:

Site The original contaminated area was surface stabilized in 1990 and is surrounded with concrete marker posts and posted as an Underground Radioactive Material area. In 1998, 1999 and 2000 **Description:**

additional surface contamination was identified adjacent to the surface stabilized area and on the north, south, east and west sides of the diversion boxes. Contamination Areas have also been identified on the surface of underground transfer lines associated with the 241-TX-155 Diversion Box. The additional contamination areas, also considered a part of this site (UPR-200-W-113), are marked with posts, chain, and Contamination Area and Soil Contamination Area signs. One small Contamination Area, southeast of 241-T(located on a transfer line to the diversion box) was recently stabilized with gravel and is now posted with Underground Radioactive Material signs.

Waste Type: Animal Waste

Waste Contaminated animal feces and growing contaminated vegetation have been found in this area. **Description:**

The biological uptake is the result of multiple releases in this area associated with the 241-TX-

155 Diversion Box and its underground pipelines.

UPR-200-W-114 **Site Code: Classification:** Accepted

Site Names: UPR-200-W-114, UN-216-W-24, Ground **ReClassification:**

Contamination East of 241-SX Tank Farm,

UN-200-W-114

Start Date: Site Type: Unplanned Release Site Status: Inactive End Date:

This site is no longer marked or posted. The release site, for many years, had been a large area **Description:**

posted with a light chain barricade with "Surface Radiation Contamination" warning signs. The 216-S-8, the 216-S-1, and the 216-S-2 Cribs were located within the larger contamination zone. The surface contamination was scraped up and consolidated into other nearby waste sites. The other waste sites were individually surface stabilized and reposted with Underground Radioactive

Material signs.

Waste Type: Soil

Waste The waste consisted of radioactive particulate matter from operational activities in the adjacent

ReClassification:

Description: 241-S/SX Tank Farms.

Site Code: UPR-200-W-115 Classification: Rejected (Proposed)

Site Names: UPR-200-W-115, UN-216-W-25, Ground

Contamination above Transfer Line Along

Cooper Street

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site had been delineated with light chain barricade and "Surface Contamination" warning

Description: signs. A waste site inspection, done in February 1998, found the area has been covered with

gravel and posted as an "Underground Radioactive Material" area.

Waste Type: Soil

Waste The soil was contaminated with material from the transfer line Clean Out Boxes.

Description:

Site Code: UPR-200-W-131 Classification: Accepted

Site Names: UPR-200-W-131, Release from 241-TX- **ReClassification:**

155

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site The 241-TX-155 Diversion Box and 241-TX-302B Catch Tank are surrounded with post and

Description: chain and Contamination Area signs. Clean gravel has been placed around the diversion box and

a sign has been added to the chain boundary identifying this to be the location of UPR-200-W-

131.

Waste Type: Process Effluent

Waste The release consisted of a dilute acidic waste solution. Ground contamination up to 25 rad per

Description: hour at 0.6 meters (2 feet) was observed.

Site Code: UPR-200-W-135 Classification: Accepted

Site Names: UPR-200-W-135, Release from 241-TX- **ReClassification:**

155, UN-200-W-135

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

There are three major encased transfer lines associated with the 241-TX-155 Diversion Box.

Description: There have been many areas of contamination identified on these transfer lines during 1999, 2000

and 2001. UPR-200-W-113 is located on a transfer line directly west of the 241-TX-155 Diversion Box and is surrounded with concrete marker posts and Underground Radioactive Material signs. An extension of UPR-200-W-113 is located northwest of the original area and surrounded with metal posts and chain and is posted with Contamination Area signs. A single

metal post, labeled UPR-200-W-135, has been placed adjacent to the UPR-200-W-113 Contamination Area.

Waste Type: Process Effluent

Waste The leaking connector (U-15) associated with this release was transferring blended metal waste **Description:** supernatant from the 244-UR vault to the 241-WR vault when the leak occurred. The amount of

supernatant from the 244-UR vault to the 241-WR vault when the leak occurred. The amount of liquid released is estimated, since the cave-in was discovered 10 days after the last transfer was

made.

Site Code: UPR-200-W-160 Classification: Rejected (Proposed)

Site Names: UPR-200-W-160, Line Break at 241-TX- ReClassification:

302C, UPR-200-W-38, UPR-200-W-40,

216-T-30

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1955

The area around the 241-TX-154 Diversion Box has been stabilized with shotcrete. This UPR is **Description:** a duplicate of UPR-200-W-40 and UPR-200-W-38. UPR-200-W-38 is the site that will remain.

Waste Type: Process Effluent

Waste Several thousand gallons of primarily metal waste and rainwater. RHO-CD-673 estimated **Description:** 19,000 liters (5026 gallons). Other reference documents estimated 7520 liters (2000 gallons).

The waste was high in salt and is neutral to basic. Dose rates up to 100 rad per hour were

recorded at a distance of 0.3 meters (1 foot) from the release pool.

The Site Was Consolidated With:

Site Code: UPR-200-W-38

Site Names: UPR-200-W-38, Line Break at 241-TX-302C, UPR-200-W-160, UPR-200-W-40, UN-200-W-

38, 216-T-30

Reason: Duplicate Site

Site Code: UPR-200-W-161 Classification: Accepted

Site Names: UPR-200-W-161, UN-216-W-35, UN-200- ReClassification:

W-161

Site Type: Unplanned Release Start Date: 1990

Site Status: Inactive End Date:

Site The site is a large radiologically controlled area posted with Underground Radioactive Material

Description: signs.

Waste Type: Soil

Waste Windblown contaminated particles effected the area east of 241-U tank farm. Soil sample

Description: results from 1990 indicate that the main radionuclide is strontium (2.93 E3 picocuries per

gram). Other contaminates included 6.26 picocuries per gram of cesium-137, 3.27 picocuries per gram of plutonium and 2.6 E-07 grams per gram of uranium. Because this site is associated

with the 241-U Tank Farm, the waste is assumed to be mixed waste.

Site Code: UPR-200-W-164 Classification: Accepted

Site Names: UPR-200-W-164, Overhead UNH Line

Leak, UN-216-W-29

ReClassification:

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The above ground UNH line has been removed. The Radiation Area signs that surrounded the

Description: pipeline were also removed. A portion of the site was interim stabilized in 1993. An area of contaminated soil found under the steam line, adjacent to the 216-S-9 crib, was covered with

clean soil and posted with "Underground Radioactive Material" warning signs.

Waste Type: Soil

Waste The original Unplanned Release was described as the gamma field (dose rate) emanating from the above ground uranyl nitrate hexahydrate (UNH) transfer line. Later, a small area of soil

the above ground uranyl nitrate hexahydrate (UNH) transfer line. Later, a small area of soil contamination was found under the steam line that the above ground line had been attached.

Liquid UNH apparently had dripped onto the soil on an area located adjacent to the 216-S-9 crib.

Site Code: UPR-200-W-167 Classification: Accepted

Site Names: UPR-200-W-167, Contamination Migration ReClassification:

from 241-TY, UN-216-W-32

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date:

The original release site, identified in 1985, was a soil contamination area located adjacent to the east side of the 241-TY Tank Farm. After the contamination was scraped and removed in 1986,

the site was no longer marked or posted. Later, in 2000, three areas on the east and northeast sides of the 241-TY Tank Farm (within the original boundaries of this Unplanned Release) were reposted as Contamination Areas (CA). Contaminated ant hills and growing contaminated vegetation was found on top of a tank farm transfer line located outside the eastern tank farm fence (also see WIDS sitecode 200-W-78). In November 2000, the CA's were covered with biobarrier material and gravel. These areas were reposted with Underground Radioactive Material signs. The underground radioactive pipeline is marked with posts and "Radioactive Pipeline"

signs. The pipeline runs through the recently stabilized areas.

Waste Type: Soil

Waste The waste consisted of radioactive contamination (specks) that migrated from the 241-TY Tank

Description: Farm. Later, contaminated ant hills and contaminated vegetation were also found in this area.

Site Code: UPR-600-20 Classification: Accepted

Site Names: UPR-600-20, UN-216-E-41, Cross Country ReClassification:

Transfer Line Contamination, Cross Site

Transfer Line

Site Type: Unplanned Release Start Date: 1988

Site Status: Inactive End Date:

Site The underground transfer line extends from U Plant in 200 West Area to the 241-ER-151

Description: Diversion Box in 200 East Area. The site includes the contaminated soil and vegetation located

on the surface of the cross site transfer line, as well as the pipeline itself. The surface of the underground line has been stabilized and is currently posted with "Underground Radioactive Materials" signs. There is also a large mound of soil, located south of the 241-EW-151 Vent Station, that is associated with the original transfer line surface stabilization activities. The soil

mound is posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The surface of the buried waste transfer line became contaminated through biological transport of radioactive materials that leaked in the pipeline encasement and windblown particulates from

the vent station. The contaminated soil contained cesium-137, plutonium-239/240, strontium-90,

and uranium from tank farm waste transferred between 200 East Area and 200 West Area

through the underground line.

200-IU-1

Site Code: 600-39 Classification: Rejected (5/31/2001)

Site Names: 600-39, Military Camp South of 200W, H-

ReClassification:

50 Gun Site Building Foundations and Ammunition Storage

Site Type: Foundation Start Date:

Site Status: Inactive End Date: 1958

The site has concrete building foundations, walkways and footings. The foundations are:

Description: #1. Vehicle maintenance with a mechanic's pit: 30 meters by 14 meters (97 feet by 47 feet).

While the pit is filled in with tumbleweeds making observation of the floor impossible, it is likely concrete. It is unlikely that oil would have been allowed to drain freely in the pit, since mechanics

would have had to work in the oil while servicing the vehicles. #2. Kitchen/mess: 12 meters by 10 meters (40 feet by 32 feet)

#3. Toilet/showers: has five visible toilet drains and two floor drains visible, along with a metal box inset in the foundation, presumably with a water valve inside. The foundation is partially covered with sand.

#4. Concrete pad: 9 meters by 6 meters (30 feet by 21 feet) #5. Concrete pad: 15 meters by 6 meters (50 feet by 20 feet).

Seven circular ammunition storage berms constructed of wood, sandbags, rock and soil measuring approximately 18 meters (60 feet) in diameter are also present. The July 2000 fire did not affect these bunkers.

Very little debris is present, just a couple of empty 5-gallon oil cans (no leaks onto soil are evident), and fencing material in two piles (site 600-223).

Waste Type: Demolition and Inert Waste

Waste The waste includes concrete walkways, concrete foundations, and ammunition storage berms

Description: constructed of wood, sandbags, rock and soil.

Site Code: 600-53 Classification: Rejected (5/31/2001)

Site Names: 600-53, H-51 Anti-Aircraft Artillery Site **ReClassification:**

Building Foundations

Site Type: Foundation Start Date:

Site Status: Inactive End Date: 1958

Site Six building foundations and concrete pads were observed at this site and are described as **Description:** follows:

#1. 12.5 meters by 10 meters (41 feet by 33 feet), concrete foundation with 4 floor drains #2. 15.6 meters by 6.1 meters (51 feet by 20 feet), concrete pad with 8 toilet drains and 11

sink/floor drains #3. 6.1 meters by 15.3 meters (20 feet by 50 feet), concrete foundation

#4. 6.7 meters by 15.3 meters (22 feet by 50 feet), concrete foundation

#5. 5.5 meters by 3.3 meters (18 feet by 11 feet), Concrete pad #6. 7.3 meters by 5.8 meters (24 feet by 19 feet), Concrete pad.

Waste Type: Demolition and Inert Waste

Waste **Description:** Concrete building foundations and concrete pads

Site Code: 600-216 **Classification:** Rejected (5/31/2001)

Site Names:

600-216, 600-48, H-61-H Anti-Aircraft

Artillery Site Building Foundations

ReClassification:

Site Type: Foundation **Start Date:**

Site Status:

Inactive

End Date: 1958

Seven concrete foundations and pads are at this site:

Description:

#1. A vehicle maintenance shop with a mechanic's trench in the foundation floor and drivethrough ability on each end. The dimensions are 34 meters by 14 meters (111 feet by 45 feet). The mechanic's trench is filled with tumbleweeds, but as a place to work it would also have a concrete floor and not be used to drain oil to the ground.

#2. Concrete pad, 9 meters by 9 meters (29 feet by 29 feet). #3. Concrete Pad, 6.4 meters by 12.5 meters (21 feet by 41 feet).

#4. Concrete kitchen foundation with floor drains and a grease trap. The dimensions are 10

meters by 12.5 meters (33 feet by 41 feet).

#5. Concrete pad, 14.6 meters by 5.5 meters (48 feet by 18 feet).

#6. Concrete foundation that appears to have been a toilet and shower facility. The dimensions

are 14.6 meters by 6 meters (48 feet by 20 feet).

#7 Concrete pad, 4 meters by 2.4 meters (13 feet by 8 feet).

A large, approximately 12 by 12 meters (40 by 40 feet) open pit is at the site and fenced; the purpose and age of the pit are unknown. There is no evidence of trash in the bottom. Two old building heaters also remain at the site.

Waste Type:

Demolition and Inert Waste

Waste

Concrete foundations and pads from former buildings and structures, some containing floor

drains and steel anchors. **Description:**

Site Code: 600-219 **Classification:** Rejected (5/31/2001)

Site Names: 600-219, H-61-R Radar Site **ReClassification:**

Site Type: Foundation **Start Date:**

Site Status: Inactive **End Date:**

Description:

Site

A concrete block remains at the site. The concrete block measures 3.4 meters by 3.4 meters by 1.2 meters (11 feet by 11 feet by 4 feet). Wooden structures that had been on each side of the block were consumed in the July 2000 range fire; only charred wood and burlap from sandbags

remain.

Waste Type:

Demolition and Inert Waste

Waste

The only material remaining at the site is a large block of concrete and some charred wood and

Description: burlap from sandbags.

600-224 **Site Code:**

Classification: Accepted

Site Names:

600-224 Military Camp South of 200W, H- ReClassification: Closed Out (2/23/2001)

50 Gun Site Septic System

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The site is a septic system located in the south portion of the H-50 Gun Site. The tanks have been **Description:** filled with sand and abandoned in place. Signs reading "Abandoned Septic Tank" are posted.

The system included a manhole, two concrete tanks and concrete block house between the tanks. The first tank is below grade, has three manholes, and measures approximately 3.7 meters by 0.8 meters by 1.5 meters (12 feet by 2.6 feet by 5 feet). The second tank is visible above grade, has two manholes, and measures 1.8 meters by 3.3 meters by 2.7 meters (5.8 feet by 10.7 feet by 9 feet). A concrete block house was located between the two tanks. The structure was demolished and the rubble removed.

Waste Type: Sanitary Sewage

Waste

Description:

Waste Type: Demolition and Inert Waste

Waste Debris from a demolished block house was located between the two septic tanks.

Description:

200-IU-2

Site Code: 600-147 Classification: Rejected (5/31/2001)

Site Names: 600-147, Wood Shack (Northwest of Gable ReClassification:

Mountain)

Site Type:OfficeStart Date:Site Status:InactiveEnd Date:

Site The site is an old, very weathered, one-room wooden shack with a gable roof, one door, one

Description: window per side, and central heater, mounted on two wooden skids. It has at least 12 wells within 50 meters (160 feet), and is probably a well driller's shed, used to shelter the crews and hold

equipment when the nearby wells were installed.

Waste Type: Equipment

Waste The site is a small weathered, wooden building.

Description:

200-IU-3

200-A TEDF Classification: Accepted **Site Code:**

Site Names: 200-A TEDF, 200 Area Treated Effluent **ReClassification:**

Disposal Facility, TEDF, 600-145, 216-E-

43A and 216-E-43B

1995 **Site Type:** Pond **Start Date:**

Site Status: Active **End Date:**

Within the 1172 ft by 629 ft fenced area are two adjacent five acre gravel disposal basins and a Site **Description:**

metal sampling building (#6653). Pond B is north of Pond A. The 6653 metal sampling building

is 14 ft by 20 ft and at the east fence line and gate area.

Waste Type: Water

Liquid waste is discharged to TEDF from the Plutonium Finishing Plant, 222-S Complex, T-Waste

Plant Complex, 284-W Power Plant, PUREX Plant, B-Plant, and 242-A-81 Water Services **Description:**

Building. Examples of waste include non-contact process cooling water, lab waste, steam condensate, air conditioning condensate, housekeeping water, outdoor sumps (rain water), reservoir overflow, boiler blowdown, sanitary sources (water softener, safety shower/eye wash,

etc), floor drains, HVAC sanitary water, raw water, storm water, strainer backflush.

600-49 Rejected (5/31/2001) **Site Code: Classification:**

Site Names: 600-49, H-42 Gun Site Building ReClassification:

Foundations and Ammunition Storage

Site Type: Foundation **Start Date:**

End Date: 1958 **Site Status:** Inactive

The site has six concrete foundations, concrete footings and miscellaneous concrete and gravel Site walkways. Four ammunition storage berms measuring about 25 meters (80 feet) in diameter are **Description:**

located in the eastern portion of the site. The wood and part of the sandbags were consumed in

the July 2000 fire. The concrete foundations were measured as follows:

#1. kitchen/mess hall with four floor drains, 12.4 meters by 10 meters (40.5 feet by 32.5 feet)

#2. toilet/showers with five floor drains, ten toilet drains, 15.4 meters by 6.3 meters (50.5 feet by

20.5 feet)

#3. concrete pad, 6.6 meters by 15.4 meters (21.5 feet by 50.5 feet)

#4. concrete pad, 4 meters by 6 meters (13 feet by 20 feet)

#5. concrete pad, 2.4 meters by 2.4 meters (8 feet by 8 feet)

#6. concrete pad, 6 meters by 7.3 meters (20 feet by 24 feet).

Waste Type: Demolition and Inert Waste

Waste Concrete building foundations, pads and walkways, pipe, sandbags and sheetmetal remain.

Description:

600-227 Site Code: **Classification:** Rejected (Proposed)

Site Names: 600-227, H-40 Gun Site Building **ReClassification:**

Foundations

Site Type: Foundation **Start Date:** Site Status: Inactive End Date: 1958

Site Description:

The site has eight building foundations, four ammunition storage structures and a valve pit remaining. The foundations are:

- #1. Kitchen/mess hall foundation with four floor drains: 12.4 meters by 9.8 meters (40.5 feet by 32 feet)
- #2. Shower/toilet foundation with five floor drains and ten toilet drains: 6 meters by 16.5 meters (20 feet by 54 feet)
- #3. Concrete pad: 4 meters by 3.2 meters (13.5 feet by 10.5 feet)
- #4. Concrete pad: 15 meters by 7.3 meters (49.5 feet by 24 feet)
- #5. Concrete pad: 3.7 meters by 5.5 meters (12 feet by 18 feet)
- #6. Concrete pad: 1.8 meters by 2.4 meters (6 feet by 8 feet)
- #7. Concrete pad: 5.5 meters by 6.7 meters (18 feet by 22 feet)
- #8. Concrete pad: 3.7 meters by 6.4 meters (12 feet by 21 feet).

The valve pit is a vertical steel culvert, 1.2 meters (4 feet) in diameter by 1.5 meters (5 feet) deep. The water main to the site is visible in the bottom of the pit, with a valve and pipes branching off toward to individual buildings.

The four ammunition storage structures on top of the hill are constructed of rock, soil, sandbags, wood, metal and tar paper. The ammunition storage bunkers are approximately 23 meters (75 feet) in diameter.

On the south side of the site is a concrete-transite pipe 35 centimeters (14 inches) high, and 10 centimeters (5 inches) in outside diameter. At the base of the pipe are pebbles averaging 4 centimeters (1.5 inches) in diameter. Neither the pipe nor the pebbles are stained. An area surrounding the pebbles is evidence of boards that have burned away, about 1.8 meters (72 inches) by 2 meters.

Waste Type: Demolition and Inert Waste

Waste Description:

Concrete foundations, pipe, wood and sandbags remain at the site.

Site Code: 6607-16

Classification: Accepted

ReClassification:

Site Names: 6607-16, Septic Tank, Project C-018H,

ECN-C018H-040

Septic Tank Start Date: 1994

Site Status: Active End Date:

Site Description:

Site Type:

The site is visible in three separate locations. Two locations for the tanks and one for the sanitary tile field. All locations are surrounded with steel fence posts and chain. The sanitary tile field is posted with a sign "Sanitary Tile Field." The tanks are not posted as septic tanks however, all access covers are posted as confined spaces. The septic tank south of the 2025E building has two concrete boxes with metal hatch covers, four vertical culverts, and an electrical panel. The tank south of the 2025EA building has five vertical culverts. The sanitary tile field has several iron rods painted yellow with square orange tops and capped PVC pipes protruding vertically from the tile field.

Waste Type: Sanitary Sewage

Waste The septic system receives sanitary sewage from the 2025E and 2025EA buildings and is designed to receive 5000 gallons per day. The current daily flow is 2725 gallons per day.

200-IU-5

600-69 Rejected (5/31/2001) **Site Code: Classification:**

600-69, Red Stained Soil (Rust) **ReClassification: Site Names:**

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

Site The site is an area of reddish soil that was discovered while a road grader was scraping an area for

Description: installation of a pipeline. As of July 14, 1997, the stain was disappearing. Some pinkish soil is visible on the surface. The area is covered with vegetation, including cheat grass, tumbleweeds,

and rabbitbrush.

Site Code: 600-148 **Classification:** Accepted

600-148, ERDF, Environmental **Site Names: ReClassification:**

Restoration Disposal Facility

Site Type: Landfill (Lined) **Start Date:** 1996

End Date: Site Status: Active

Site The Environmental Restoration Disposal Facility (ERDF) is a landfill designed to accept the **Description:** disposal of radioactive, hazardous/ dangerous, asbestos, polychlorinated biphenyl (PCB), and

mixed wastes resulting from the remediation of operable units within the 100, 200, and 300 Area National Priority List (NPL) sites of the Hanford Site. The facility consists of two disposal cells, and covers an area of approximately 4.1 square kilometers (1.6 square miles) and has a waste capacity of 9.2E+05 cubic meters (1.2E+06 Cubic yards). The landfill has a double composite

liner and a leachate collection system

Waste Type: Soil

Waste The total volume of waste is expected to be less than 2.14E+07 cubic meters (2.8E+07 cubic

yards) and is expected to consist of approximately 65% to 75% contaminated soil and **Description:**

demolition debris.

Waste Type: Misc. Trash and Debris

The total volume of waste is expected to be less than 2.14E+07 cubic meters (2.8E+07 cubic Waste

Description: yards) and is expected to consist of approximately 15% to 20% burial ground waste.

Waste Type: Equipment

The total volume of waste is expected to be less than 2.14E+07 cubic meters (2.8E+07 cubic Waste **Description:**

yards) is expected to consist of approximately 10% to 15% wastewater pipelines, ancillary

equipment, and associated soil contamination.

Site Code: 616 **Classification:** Accepted

Site Names: 616, 616 Building Non-Radioactive **ReClassification:** Closed Out (10/24/2001)

> Dangerous Waste Storage Facility, 616 Nonradioactive Dangerous Waste Storage,

616 NRDWSF

Site Type:StorageStart Date:1986Site Status:ActiveEnd Date:2001

Site The 616 Nonradioactive Dangerous Waste Storage Facility (NRDWSF) is a clean closed **Description:** Resource Conservation and Recovery Act Treatment, Storage, and/or Disposal Unit (RCRA

TSD). The above ground building is partitioned into six areas, referred to as cells, for storage of different types of hazardous waste. The facility also contains an office and a material handling

area.

Waste Type: Barrels/Drums/Buckets/Cans

Waste No wastes remain in the facility. The facility had provided container storage for nonradioactive **Description:** dangerous wastes. These wastes consisted of listed wastes, wastes from nonspecific sources,

characteristic wastes, and state-only wastes.

Site Code: 6607-9 Classification: Accepted

Site Names: 6607-9, Septic Tank 6607-9 Large On-Site ReClassification:

Sewage System, Project W-011H

Site Type:Septic TankStart Date:Site Status:ActiveEnd Date:

Site The site is a septic system and disposal field. The site is bordered with a steel post and chain **Description:** barricade with signs posted "SEPTIC TANK AND DISPOSAL FIELD." There are five

manholes and two concrete boxes with metal hatch covers visible at grade level at the site. There

is also an electrical panel with are red warning light on top and an bell on the side.

Waste Type: Sanitary Sewage

Waste The site receives sanitary sewage from the Waste Sampling and Characterization Facility.

Description:

200-IU-6

Site Code: 600-187 Classification: Accepted

Site Names: 600-187, West Lake Honey Dump Station **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is located in a depression and appears to have been under water as part of "West Lake"

Description: when it was larger. Vegetation in the area is thick and short except for the lowest areas where th

when it was larger. Vegetation in the area is thick and short except for the lowest areas where the soil is very silty and shows desiccation cracks on the surface. There was no visual evidence of

sewage waste in the area.

200-LW-1

Site Code: 216-B-53A **Classification:** Accepted

216-B-53A, 216-B-53A Trench, PRTR **ReClassification: Site Names:**

Trench

Trench **Start Date:** 1965 **Site Type: Site Status:** Inactive **End Date:** 1965

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site **Description:** with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations.

Process Effluent **Waste Type:**

The site received waste from the Plutonium Recycle Test Reactor in the 300 Area. The waste is Waste

neutral to basic. This trench received 100 grams of plutonium. **Description:**

Site Code: 216-B-53B **Classification:** Accepted

216-B-53B, 216-B-53 Trench, 216-B-53B **Site Names: ReClassification:**

Trench

1962 **Start Date: Site Type:** Trench **End Date:** 1963 **Site Status:** Inactive

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers **Description:**

outline the area where the trenches are located, but do not identify specific trench locations. The BC Cribs and Trenches are located inside the radiologically controlled area known as the BC

Controlled Area (UPR-200-E-83).

The trench is divided into two sections by an earthen dam at the center. The dam is 1.5 meters (5

feet) high and 12.7 centimeter (5 inch) wide at the top. The side slope is 1.75:1.

Waste Type: Process Effluent

The site received liquid waste from the 300 Area Hanford Laboratory Operations. The waste is Waste

low in salt and is neutral to basic. **Description:**

Site Code: 216-B-54 **Classification:** Accepted

Site Names: 216-B-54, 216-B-54 Trench **ReClassification:**

1963 **Site Type:** Trench **Start Date: Site Status:** Inactive **End Date:** 1963

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site **Description:**

with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations. The trench is located inside the Radiologically Controlled Area boundaries known as the BC

Controlled Area (UPR-200-E-83).

Waste Type: Process Effluent

The site received waste from the Hanford Laboratory Operations (BNWL) in the 300 Area. The Waste

waste is low in salt and is neutral to basic. **Description:**

Site Code: 216-B-58 **Classification:** Accepted

Site Names: 216-B-58, 216-B-58 Trench, 216-B-59 Crib **ReClassification:**

Start Date: 1965 **Site Type:** Trench **Site Status:** Inactive **End Date:** 1967

Site **Description:** The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The trench is within the posted Radiologically Controlled Area known as the BC Controlled Area (UPR-200-E-83).

The trench was divided into 7.6-meter (25-foot) sections by 1.2-meter (4-foot) high earthen dams. Each section had a wooden cover. A 1.22-meter (48-inch) diameter pipe was placed along the bottom. The pipe was corrugated with five 10.16-centimeter (4-inch) diameter holes around the bottom half.

Waste Type: Process Effluent

Waste The site received Batelle Northwest laboratory (BNWL) waste from the 300 Area. The waste is

low in salt and is neutral to basic. **Description:**

216-T-27 **Classification: Site Code:** Accepted

Site Names: 216-T-27, 216-TY-2 Cavern, 216-TY-2 **ReClassification:**

Crib, 216-TX-2 Cavern, 216-TX-2 Crib

1965 **Site Type:** Crib **Start Date:**

End Date: 1965 **Site Status:** Inactive

The 216-T-26, 216-T-27 and 216-T-28 cribs are enclosed within a common steel post and chain Site barricade that is posted "Underground Radioactive Material". The 216-TY-201 flush tank is **Description:**

located in the northeast corner of the area.

Waste Type: Process Effluent

The site received 300 Area lab waste containing nitrates, 221-T steam condensate and process Waste **Description:** decontamination waste and equipment decontamination waste from 2706-T. A page of typed,

unsigned notes was found that documents the transport of "round the clock" trucking of waste from the PRTR rupture incident in September 1965. The notes indicate that the waste would be discharged into the 216-T-27 crib. A different page of notes, also unsigned, states that more than 100 truck loads of liquid waste from the PRTR incident was discharged into the 216-T-28 crib during September and October 1965. Since the same truck unloading station would have been used for either crib, it is difficult to be sure how much waste was discharged to the 216-T-

27 and how much was discharged to the 216-T-28 crib.

Site Code: 216-T-28 **Classification:** Accepted **Site Names:** 216-T-28, 216-TY-3 Cavern, 216-TY-3

Crib, 216-TX-3 Cavern, 216-TX-3 Crib

ReClassification:

Site Type:CribStart Date:1960Site Status:InactiveEnd Date:1966

Site The 216-T-26, 216-T-27 and 216-T-28 cribs are enclosed within a common steel post and chain

Description: barricade that is posted "Underground Radioactive Material". The 216-TY-201 flush tank is

located in the northeast corner of the area.

Waste Type: Process Effluent

Waste From February 1960 through February 1963, the crib received steam condensate and process decontamination waste via the 241-T-112 tank in the 241-T Tank Farm. In 1963, 2607-T

equipment decontamination waste was added to the waste stream. In 1964, 300 Area laboratory waste was sent to this crib via tanker trucks from the 340 Waste Transfer Facility. A page of typed, unsigned notes dated October 26, 1965 indicated that 189 truck loads of liquid waste from 300 Area were discharged into the 216-T-28 crib between September 13, 1965 and October 25, 1965. The total volume during that time was 945,000 gallons. Most of the waste was from the PRPR rupture incident. The crib was deactivated in December 1966 when the

prescribed radionuclide disposal limit was reached.

Site Code: 216-T-34 Classification: Accepted

Site Names: 216-T-34, 216-T-34 Crib ReClassification:

Site Type:CribStart Date:1966Site Status:InactiveEnd Date:1967

Site The site is a crib posted with "Underground Radioactive Material" signs.

Description:

The crib's piping consists of perforated vitrified clay pipe rectangular loop, and a vitreous clay pipe extending into the center of the crib. The piping rests on a layer of gravel. Two gage well

risers and one filter riser are visible from the surface.

Waste Type: Process Effluent

Waste The site received liquid 300 Area laboratory waste from the 340 Facility. The waste was low in

Description: salt, neutral to basic, and contained nitrate.

Site Code: 216-T-35 Classification: Accepted

Site Names: 216-T-35, 216-T-35 Crib ReClassification:

Site Type:CribStart Date:1967Site Status:InactiveEnd Date:1968

Site The site is a surface stabilized crib that is marked and posted with Underground Radioactive

Description: Material signs. The crib was constructed with one perforated drain line, and one perforated crib waste distribution line, in parallel. Both lines were placed horizontally below grade and covered

by gravel. The crib has two gage well risers and one vent riser visible from the surface.

of graves. The end that the gage went here were their values and the contract of the contract

Waste Type: Process Effluent

Waste The crib received waste from the 300 Area laboratory facilities via railroad tank cars and tank

Description: trucks. The site waste contained nitrate.

Site Code: 200-W-21 Classification: Accepted

Site Names: 200-W-21, 204-T Unloading Station, T- ReClassification:

Plant Waste Railcar Unloading Facility

Site Type:Pump StationStart Date:1966Site Status:InactiveEnd Date:1968

Site The unloading station consisted of two unloading platforms. The platforms and piping from both

Description: stations were removed in 1996. The area has a short railroad siding extending from the main rail

line into T-Plant. The concrete structure foundations remain and are posted with Underground

Radioactive Material signs.

Waste Type: Equipment

Waste The platform structures and equipment supported the unloading of liquid waste from the 300

Description: Area into the 216-T-34 and 216-T-35 cribs.

Site Code: 200-W-82 Classification: Accepted

Site Names: 200-W-82, Risers East of 216-TY-201 and ReClassification:

216-T-26, 216-T-27, and 216-T-28 Cribs,

Crib Unloading Station

Site Type:Product PipingStart Date:1960Site Status:InactiveEnd Date:1966

Site The site consists of two concrete pads with flanged risers, surrounded by Contamination Area

Description: postings.

Waste Type: Equipment

Waste The 216-T-27 and 216-T-28 received liquid waste from the 300 Area via trucks. The waste at

Description: the unloading station is the underground transfer piping, risers and pads and adjacent soil

contaminated from leaks.

200-LW-2

Site Code: 216-A-15 Classification: Accepted

Site Names: 216-A-15, Miscellaneous Stream #461 ReClassification:

Site Type:French DrainStart Date:1955Site Status:InactiveEnd Date:1972

The unit is composed of two, 1.2 meter (4 foot) lengths of bell-end, reinforced concrete sewer pipes placed vertically end to end. It is filled with 1.8 meters (6 feet) of stone. A vent pipe

extends above grade.

Waste Type: Process Effluent

Waste The site received the drainage from the 216-A-10 Process Condensate Sampler Pit #4. The

Description: waste is acidic. The site contains less than 50 curies total beta activity.

Site Code: 216-B-6 Classification: Accepted

Site Names: 216-B-6, 222-B-110 Reverse Well, 216-B- ReClassification:

6 Dry Well, 216-B-6 Crib, 222-B-110 Dry

Well

Site Type:Injection/Reverse WellStart Date:1945Site Status:InactiveEnd Date:1949

Site A concrete AC-540 post marks the location of this site and is labeled as an "Underground **Description:** Radioactive Material" site. The reverse well is a 15.25-centimeter (6-inch) diameter pipe

extending 48 meters (160 feet) below ground surface. The lower 7.6 meters (25 feet) of casing is

perforated. The vent pipe was cut below grade.

Waste Type: Process Effluent

Waste The site received decontamination sink and sample slurper waste from 222-B Building. The site **Description:** contains not less than 10 curies total beta. HW-4850, written in 1945, states that the 222-T

laboratory was discharging approximately 2.6 curies of fission products and 600 milligrams of plutonium to the dry well per month. Since similar work was done at the 222-B Laboratory, similar waste inventory can be assumed. The waste is acidic and contains transuranics and

fission products.

Site Code: 216-B-10A Classification: Accepted

Site Names: 216-B-10A, 222-B-1 Crib, 216-B-10 Crib, ReClassification:

292-B

Site Type:CribStart Date:1949Site Status:InactiveEnd Date:1952

Site The unit is a 3.7 by 3.7 by 1.1 meters (12 by 12 by 3.5 feet) wooden structure in an excavation. **Description:** The side slope is 1:1. The bottom of the excavation is 6.1 meters (20 feet) below grade. The

structure is not gravel-filled and has cave-in potential. The surface of the unit has subsided about 0.9 meters (3 feet) in the center, possibly indicating deterioration of the lumber. The marker post

is present, but down.

Waste Type: Process Effluent

Waste Until December 1951, the site received the decontamination sink and sample slurper waste from Description: 222-B Building and floor drainage from 292-B Building. After December 1951, the site

received the same as above minus the 222-B Building waste. The waste is acidic and contains

transuranics and fission products.

Site Code: 216-B-10B Classification: Accepted

Site Names: 216-B-10B, 222-B-2 Crib, 216-B-10 Crib ReClassification:

Site Type:CribStart Date:1949Site Status:InactiveEnd Date:1973

Site The unit is a 3.7 by 3.7 by 1.1-meter (12 by 12 by 3.5-foot) wooden structure in an excavation.

Description: The side slope is 1:1. The bottom of the excavation is 6.1 meters (20 feet) below grade. The

structure is not gravel-filled and has cave-in potential. The earth has subsided about $0.9\ meters\ (3$

feet) over the top of the unit. No site marker post is present.

Waste Type: Process Effluent

Waste From December 1949 to December 1951 the site received the decontamination sink and sample slurper waste from the 222-B Building and the floor drainage from the 292-B Building. From

December 1951 to May 1969 the site received only the floor drainage from the 292-B Building. From May 1969 to October 1973 the site received only the decontamination sink and shower

waste from the 221-BC Building.

Site Code: 216-S-19 Classification: Accepted

Site Names: 216-S-19, 222-S Lab Swamp, 216-SL-1, ReClassification:

REDOX Lab Swamp, 216-S-19 Pond

Site Type: Pond Start Date: 1952

Site Status: Inactive End Date: 1984

Site This unit consists of a dried pond.

Description:

Waste Type: Process Effluent

Waste The site received ventilation cooling water, lab hood waste, and decontamination sink waste.

Description:

Site Code: 216-S-20 Classification: Accepted

Site Names: 216-S-20, 216-SL-1&2 Crib, 216-SL-2 ReClassification:

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1972

Site The site is posted with Underground Radioactive Material (URM) signs at each corner. Two

Description: areas above the crib structures, inside the URM, are marked with post and chain and Cave-In

Potential signs. An abandoned waste unloading station is located approximately 7.6 meters (25 feet) south of the posted crib. The unloading station is posted with Contamination Area signs.

Waste Type: Process Effluent

Waste Description:

From January 1952 to July 1953, the site received miscellaneous waste from lab hoods and decontamination sinks in the 222-S Building via the 219-S Retention Building. From July 1953 to September 1963, the site received the above effluent via the 207-SL Retention Basin, the 219-S Retention Building and 300 Area laboratory waste via truck, unloaded into the "manhole". From September 1963 to January 1969, the site received miscellaneous waste from lab hoods and decontamination sinks in 222-S via the 219-S Retention Building. The 300 Area lab waste was rerouted to the 216-T-28 Crib.

Site Code: 216-S-26 Classification: Accepted

Site Names: 216-S-26, 216-S-19 Replacement Facility, **ReClassification:**

216-S-26 Crib

Site Type:CribStart Date:1984Site Status:InactiveEnd Date:1995

Site Southeast of 222-S Building, outside the 200 West Area perimeter fencing A 6-in (15 cm)

Description: vitrified clay, perforated distribution pipe runs the length of the unit, 1.5 ft (0.45 m) above the

bottom. 2.5 ft (0.76 m) of 1.5 to 3 in (4 to 8 cm) gravel lines the bottom, covered with a membrane barrier and 9.5 ft (2.9 m) of earth. One gage well with a liquid level indicator is

located 100 ft (30 m) from the west end, and a vent riser is located at the east end.

Waste Type: Steam Condensate

Waste The site received steam condensate and sink wastes, which are byproduct radioactive wastes, from the 222-S Laboratory via the 207-SL Retention Basin. The wastes contain a variety of

chemicals, including acetone, nitric acid, and lesser amounts of sulfuric and hydrofluoric acids.

Site Code: 207-SL Classification: Accepted

Site Names: 207-SL, 222-S Retention Basin, REDOX ReClassification:

Lab Retention Basin, 207-SL Retention

Basin

Site Type: Retention Basin Start Date: 1952

Site Status: Active End Date:

Site The site consists of a large below ground basin that is divided into two 94,625 liter (25,000

Description: gallon) holding basins. The below ground basins are constructed of reinforced concrete walls 30

to 41 centimeters (12 to 16 inches) thick, and the floor is 38 centimeters (15 inches) thick. The

unit also consists of three above ground 75,700 liter (20,000 gallon) holding tanks.

Waste Type: Process Effluent

Waste From 2/52 until 12/54, the site received low-level waste, including ventilation cooling water and

Description: miscellaneous wastes from laboratory hoods and sinks in the 222-S Laboratory. These were

then discharged to the 216-S-19 Pond. From 12/54 to 10/55, the site was inactive (radioactivity levels of waste exceeded set limits). After 10/55, the site received nondangerous/nonradioactive waste. This unit discharged to the 216-S-19 Pond until 11/94, then was routed to the 216-S-26

Crib until 7/94, and since 7/94 discharges to the 200 Area TEDF.

Site Code: 216-T-2 Classification: Accepted

Site Names: 216-T-2, 222-T-110 Dry Well, 222-T ReClassification:

Reverse Well

Site Type:Injection/Reverse WellStart Date:1945Site Status:InactiveEnd Date:1950

Site The reverse well is a below grade 15.2 centimeter well casing with a 7.6-centimeter (3-inch)

Description: diameter vent pipe extending approximately 1.2 meters (4 feet) above grade. It has been capped

and is surrounded with light post and chain. A single cement AC-540 marker identifies the site.

It is posted as an Underground Radioactive Material Area.

Waste Type: Process Effluent

Waste The site received decontamination sink waste and sample slurper waste from the 222-T **Description:** Building. HW-4850, written in 1945, states that the 222-T laboratory was discharging

approximately 2.6 curies of fission products and 600 milligrams of plutonium to the dry well per

month. The waste is acidic.

Site Code: 216-T-8 Classification: Accepted

Site Names: 216-T-8, 222-T-1 & 2 Cribs ReClassification:

Site Type:CribStart Date:1950Site Status:InactiveEnd Date:1951

The site consists of two wood crib boxes, each set into a pit with sloped sides. Each crib pit has **Description:** 4.3-meter (14-foot) by 4.3-meter (14-foot) bottom dimension, with a 1:1 side slope. The pits are

23 meters (75 feet) apart. The boxes have risers and are connected in series by a pipe. One box

overflows into the other. The pits are backfilled.

Waste Type: Process Effluent

Waste The waste was neutral to basic, and contained sulfuric acid, nitric acid, and sodium dichromate.

Description:

Site Code: 216-U-4 Classification: Accepted

Site Names: 216-U-4, 222-U Dry Well, 222-U-110 Dry ReClassification:

Well, 216-U-2, 216-U-4 Dry Well

Site Type:Injection/Reverse WellStart Date:1947Site Status:InactiveEnd Date:1955

Site This site consists of a deactivated reverse well. The well consists of pipe sunk into the ground

Description: with the bottom 8 meters (25 feet) of pipe perforated. The end of the pipe is nearly closed by

flattening. The site is marked with a small cement cover and a bronze medallion. It is posted as

"Underground Radioactive Material".

Waste Type: Process Effluent

Waste RHO-CD-673 states that both plutonium and fission products were discharged to the site from laboratory hoods and sinks. The site waste contains nitrate. A limited field investigation of high-

priority waste units was conducted from August 1993 through August 1994. This site was included in that investigation. DOE/RL-95-13 includes information related to characterization

borehole 299-W19-98 that was drilled between 216-U-4 and 216-U-4A. Cesium-137, cobalt-60 and europium-154 were identified.

Site Code: 216-U-4A Classification: Accepted

Site Names: 216-U-4A, 216-U-4 Reverse Well ReClassification:

Replacement French Drain, 216-U-4 Dry

Well

Site Type:French DrainStart Date:1955Site Status:InactiveEnd Date:1970

Site This site is a french drain that is posted "Underground Radioactive Material". The drain consists **Description:** of a vertically set concrete pipe. The drain rests on undisturbed soil and is not gravel filled. The

top of the drain is painted yellow and has a removable lid.

Waste Type: Process Effluent

Waste The site waste contains nitrate, phosphate, and sodium. RHO-CD-673 states that both plutonium and fission products were discharged to the site from laboratory hoods and sinks. A limited field

investigation of high-priority waste units was conducted from August 1993 through August 1994. DOE/RL-95-13 includes information related to characterization borehole 299-W19-98 that was drilled between 216-U-4 and 216-U-4A. Cesium-137, cobalt-60 and europium-154

were identified.

Site Code: 216-U-4B Classification: Accepted

Site Names: 216-U-4B, 216-U-4B Dry Well, 216-U-4B ReClassification:

French Drain

Site Type:French DrainStart Date:1960Site Status:InactiveEnd Date:1970

Site The site consists of a french drain that is under a cement pad. A one inch diameter stainless steel

Description: vent riser extends approximately 1.2 meters (4 feet) above the surface. It is posted with

"Underground Radioactive Material" signs.

Waste Type: Process Effluent

Waste From January 1960 to July 1970 the site received waste from a hot cell and hood in the 222-U **Description:** Building. From January 1965 to July 1970 the site received hot cell and hood waste from

Building. From January 1965 to July 1970 the site received hot cell and hood waste from Pacific Northwest Laboratory experiments conducted in 222-U. The site waste contains nitrate.

Site Code: 200-W-27 Classification: Rejected (4/26/2000)

Site Names: 200-W-27, 216-S-19 Borrow Pit **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1984

Site Status: Inactive End Date:

Site The site is a shallow, scraped area south of the stabilized 216-S-19 Pond. The site has been revegetated with crested wheatgrass, and now resembles the stabilized pond (the area of the

former pond is delineated with concrete posts).

200-W-46 **Site Code: Classification:** Accepted

200-W-46, 222-S Laboratory Room 4-E 90-**Site Names: ReClassification:** Rejected (9/14/2000)

Day Waste Accumulation Area, Satellite

Accumulation Area

Satellite Accumulation Area **Site Type: Start Date: Site Status:** Active **End Date:**

This site is not a 90 Day Storage Area but is a Satellite Accumulation Area for Room 4E of the Site

222-S Analytical Laboratory. **Description:**

Waste Type: Chemicals

Maintenance waste and expired reagents/chemicals are held here. Waste

Description:

200-W-49 **Site Code: Classification:** Accepted

200-W-49, 222-S Laboratory Room 2-D 90- ReClassification: Rejected (9/14/2000) **Site Names:**

Day Waste Accumulation Area

Site Type: Storage Pad (<90 day) **Start Date:**

Site Status: End Date: Active

The storage pad is located in Room 2D of the 222-S Analytical Laboratory, and holds solid and Site

liquid mixed waste from laboratory sample analysis activities. **Description:**

Chemicals Waste Type:

Waste The pad holds solid and liquid mixed waste from laboratory sample analysis.

Description:

Classification: 216-Z-7 Site Code: Accepted

216-Z-7, 231-W Crib, 231-W Trench, 216-**Site Names: ReClassification:**

Z-6

Site Type: Crib **Start Date:** 1947 **Site Status: End Date:** 1967 Inactive

Site The 216-Z-7 Crib is an inactive below grade waste management unit. The crib trench was

backfilled upon retirement in 1967. The crib consists of two parallel wooden structures placed in **Description:**

two shallow parallel trenches within a single terraced excavation. Each wooden box consists of three timber tiers, with a perforated distribution box running the length of the second tier. The

interior trenches are backfilled and covered with wood planks.

Waste Type: Process Effluent

From 1947 to 1953 this crib received process waste from the 231-Z Building via the 231-Z-151 Waste Sump. Beginning in 1953, the site received Hanford laboratory waste from the 231-Z Building, **Description:**

until 1965. From 1965 to 1967, the site received laboratory waste generated by Pacific

Northwest Laboratory operations inside the 231-Z Building, and waste delivered in tanker trucks

from the 340 Building.

Site Code: 216-Z-16 Classification: Accepted

Site Names: 216-Z-16 ReClassification:

Site Type:CribStart Date:1968Site Status:InactiveEnd Date:1977

Site The site is a rectangular excavation with gravel filling the bottom third. A perforated pipe runs

Description: the length of the excavation. The gravel is covered with a polyethylene barrier. The excavation is

backfilled to grade.

Waste Type: Process Effluent

Waste The site received waste from Pacific Northwest Laboratory operations in the 231-Z Building.

Description: The waste was neutral to basic, and included approximately 0.08 kilograms (0.16 pounds) of

plutonium.

Site Code: 216-Z-17 Classification: Accepted

Site Names: 216-Z-17, 216-Z-17 Ditch ReClassification:

Site Type:TrenchStart Date:1967Site Status:InactiveEnd Date:1968

Site The 216-Z-17 is an inactive waste management unit that has been deactivated and backfilled.

Description: During operation this unit was configured as a long excavation that had sloped sides. The carbon

steel effluent discharge pipe fed into a metering box that in turn discharged to the open trench.

Waste Type: Process Effluent

Waste The site received waste from Pacific Northwest Laboratory operations in the 231-Z Building.

Description: The waste is neutral to basic, and contained approximately 0.05 kilograms (0.11 pounds) of

plutonium.

Site Code: CTFN 2703-E Classification: Accepted

Site Names: CTFN 2703-E, Chemical Tile Field North **ReClassification:**

of 2703-E

Site Type:Drain/Tile FieldStart Date:Site Status:InactiveEnd Date:

Site The Chemical Tile Field North (CTFN) of 2703-E includes a trench and seepage basin. This site

Description: is inactive. As of 1994, this unit had no free standing liquids nor any sign of natural vegetative

growth. This unit has not been backfilled or filled with any materials that would facilitate

drainage.

Waste Type: Process Effluent

Waste The Chemical Tile Field North of 2703-E is currently inactive. The wastewater from the 272-E

Description: Building was hydrotesting wastewater which was not treated before being discharged to the floor

drain. The wastewater discharged from the two sumps in the 2703-E Building included: floor

wash, rinse water, cooling waster sinks, and steam condensate.

200-MW-1

Site Code: 216-A-4 Classification: Accepted

Site Names: 216-A-4, 216-A-4 Cavern ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1958

Site The site is located within a large gravel area, known as the PUREX Stabilized Area (sitecode 200-

Description: E-103). A large green vent riser extends above the surface.

Waste Type: Process Effluent

Waste The site received the laboratory cell drainage from the 202-A Building (the site was reported to have also received 291-A-1 Stack drainage, see the Site Comments section under the "Summary"

tab). The waste is low in salt and is neutral to basic. The 216-A-4 Crib also received waste solution from the 216-A-2 waste collection tank, the U-3 and U-4 laboratory waste receiver tanks (located in the acid storage vault), the dissolver off-gas scrubbers and the 241-A-151 Diversion Box Catch Tank. 216-A-4 was intended to receive a maximum of (75 gallons per minute) low level radioactive liquid waste. Waste volume from the laboratory waste and cell

drain was 52,990 liters (14,000 gallons).

Site Code: 216-A-11 Classification: Accepted

Site Names: 216-A-11 French Drain, Miscellaneous **ReClassification:**

Stream #465

Site Type:French DrainStart Date:1956Site Status:InactiveEnd Date:1972

Site The site is inside a small area delineated by steel posts and chain. It is posted as an Underground **Description:** Radioactive Material area. A 0.76 meter (2.5 foot) diameter, circular metal cover is visible. One

concrete AC-540 marker identifies the site.

The unit is composed of two reinforced concrete pipes placed vertically end to end. The excavation is 3.0 meters (10 feet) in diameter and extends to a depth of 1.5 meters (5 feet) below the bottom. Both the drain and the excavation are filled with 8-centimeter (3-inch) rock to the top

and are backfilled over.

Waste Type: Steam Condensate

Waste The site received the Trap Pit #1 drainage from the 202-A Building. The waste was low in salt

Description: and was neutral to basic. The site contains less than 50 curies total beta activity.

Site Code: 216-A-12 Classification: Accepted

Site Names: 216-A-12, Miscellaneous Stream #463 ReClassification:

Site Type:French DrainStart Date:1955Site Status:InactiveEnd Date:1972

Site The site is not marked or posted. There are no visible surface features for this drain. The wall of the trap pit includes a "French Drain" label. The unit is composed of two reinforced concrete tile

pipes placed vertically end to end. The excavation is 3.0 meters (10 feet) in diameter and extends 1.5 meters (5 feet) below the bottom. Both the drain and the excavation are filled with gravel to the top of the unit and backfilled over. This site cannot be visually located.

Waste Type: Steam Condensate

Waste Description:

The site received the Steam Trap Pit #3 drainage from the 202-A Building. The waste was low in salt and was neutral to basic. The site contains less than 50 curies total beta activity. It is

possible that more than one Trap Pit drained to this french drain.

Site Code: 216-A-13 Classification: Accepted

Site Names: 216-A-13, 216-A-13 French Drain, ReClassification:

Miscellaneous Stream #460

Site Type:French DrainStart Date:1956Site Status:InactiveEnd Date:1962

Site Description:

The site is not marked or posted. A 1.2 meter (45 inch) diameter metal cover is visible over the drain. The drain is constructed of two lengths of concrete pipe placed vertically end to end. The unit is filled to a depth of 0.9 meters (3 feet) with 5 to 8 centimeters (2 to 3 inches) of rock. This unit has a bed of gravel around the lower section of pipe extending a minimum of 0.3 meters (1 foot) away from the pipe in all directions.

Waste Type: Water

Waste Description:

The site received the seal water from the air sampler vacuum pumps in the 202-A Building. The waste is low in salt, neutral to basic, and contains less than 1 curie total beta activity.

The 1993 PUREX AAMS Report lists the total volume released as 100,000 liters (30,000 gallons), but does not give the reference for this discrepancy from the original Stenner report. It is assumed that the original number is correct, and the AAMS report added an extra "0" in error.

Site Code: 216-A-14 Classification: Accepted

Site Names: 216-A-14, French Drain - Vacuum Cleaner ReClassification:

Filter Pit, Miscellaneous Stream #462

Site Type:French DrainStart Date:1956Site Status:InactiveEnd Date:1972

Site Description:

Vacuum Cleaner Filter Pit is a concrete box with approximately 0.6 meters (2 feet) above grade. The sump is inside the pit and drains through an underground pipe to the buried frnch drain. The drain is composed of two reinforced concrete pipes placed vertically end to end. The excavation is 3.0 meters (10 feet) in diameter and extends to a depth of 1.5 meters (5 feet) below the bottom. Both the drain and the excavation are filled with 8-centimeter (3-inch) rock to the top and

The drain is not marked or posted. There are no visible surface features for this french drain. The

backfilled over.

The filter pit access is labeled Contamination Area, Radiation Area, Airborne Contamination and Confined Space.

A 10 centimeter (4 inch) M23b-UD inlet pipe, approximately 1.5 meters (5 feet) long, extends horizontally into the unit, 7.9 meters (26 feet) below grade. The site has a 1.3 centimeter (0.5

inch) thick steel cover.

Waste Type: Steam Condensate

Waste The site received the vacuum cleaner filter and blower pit drainage from the 202-A Building.

Description: The waste was low in salt, neutral to basic, and contains less than 1 curie total beta activity.

Site Code: 216-A-21 Classification: Accepted

Site Names: 216-A-21, 216-A-21 Crib ReClassification:

Site Type:CribStart Date:1957Site Status:InactiveEnd Date:1965

Site The crib is covered with gravel. It is marked and posted with Underground Radioactive Material

Description: signs.

A 10-centimeter (4-inch) stainless steel distribution line runs horizontally through the length of the site, 2.1 meters (7 feet) below grade. Branching horizontally from this distribution line are four 1.2-meter (4-foot) sections of 10-centimeter (4-inch) tubing. Branching vertically at the same locations are four 2.4-meter (8-foot) sections of 10-centimeter (4-inch) schedule 40 perforated pipe running to the bottom of the site. The excavation is V-shaped in cross-section with a side slope of 1:1.5. The excavation has approximately 1.8 meters (6 feet) of gravel fill and is backfilled over.

Waste Type: Process Effluent

Waste Description:

Until June 1958, the site received sump waste from 293-A Building. From June 1958 to December 1958, the site was inactive. From December 1958 to June 1965, the site received the above effluent, laboratory cell drainage from the 202-A Building, and the 291-A-1 Stack drainage. The waste is low in salt and is neutral to basic.

Site Code: 216-A-22 Classification: Accepted

Site Names: 216-A-22, 216-A-22 French Drain, 216-A- ReClassification:

22 Crib

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1958

Site The crib is marked with a single cement AC-540 marker and Underground Radioactive Material

Description: signs.

Waste Type: Stormwater Runoff

Waste Description:

The site received the drainage from the 203-A Building truck loadout apron, the sump waste from the 203-A Building enclosure, and the heating coil condensate from the P-1 through P-4 uraynal nitrate hexahydrate (UNH) tanks. The waste is low in salt, neutral to basic, and contains less than 1 curie total beta activity. The site received some uranium from the discharges. In 1961, a release from a UNH truck spilled 1335 pounds of uranium on the truck apron. Some of this drained into the 216-A-22 crib.

Hanford Site Waste Management Units Report January 2004

Site Code: 216-A-26 Classification: Accepted

Site Names: 216-A-26, 216-A-26 French Drain, 216-A- ReClassification:

26B, Miscellaneous Stream #464

Site Type:French DrainStart Date:1965Site Status:InactiveEnd Date:1991

Site There are no visible surface features for this drain. The unit is composed of three clay pipe (each **Description:** 5 feet long) segments buried vertically. Some references state the clay pipe diameter is 3 feet and

some state the diameter is 4 feet.

Waste Type: Water

Waste The site received the floor drainage from the 291-A Fan Control House. The waste was low in

Description: salt, neutral to basic, and contains less than 1 curie of total beta activity. The quantity of

discharge is unknown.

Site Code: 216-A-26A Classification: Accepted

Site Names: 216-A-26A, 216-A-25 Crib, 216-A-26 ReClassification:

French Drain, 291-A French Drain

Site Type: French Drain Start Date: 1959
Site Status: Inactive End Date: 1965

Site There are no surface features for this drain. The unit is composed of three sections of clay pipe

Description: each 1.5 meters (5 feet) long, placed vertically end to end below grade. Some references state the

pipe diameter was 0.9 meters (3 feet) and other references state the diameter as 1.2 meters (4 feet).

Waste Type: Water

Waste The site received the floor drainage from the 291-A Fan Control Room. The waste is low in salt,

Description: neutral to basic, and contains less than 1 curie total beta activity.

Site Code: 216-A-27 Classification: Accepted

Site Names: 216-A-27, 216-A-27 Crib ReClassification:

Site Type:CribStart Date:1965Site Status:InactiveEnd Date:1970

Site The crib is covered with gravel. It is marked and posted with Underground Radioactive Material

Description: signs. The crib is constructed of a 15-centimeter (6-inch) stainless steel perforated pipe is placed

horizontally the length of the unit, 3 meters (10 feet) below grade. There is 680 cubic meters (24,000 cubic feet) of gravel fill in the excavation bottom. The site is backfilled over. The side

slope is 1:1.5.

Waste Type: Process Effluent

Waste The site received the sump waste from the 293-A Building, the lab cell drainage from the 202-A

Description: Building, and the 291-A-1 Stack drainage. The waste is low in salt and is neutral to basic.

216-A-32 **Classification:** Accepted **Site Code:**

216-A-32, 216-A-32 Crib **ReClassification: Site Names:**

Start Date: 1959 **Site Type:** Crib **Site Status:** Inactive **End Date:** 1972

Site The site is currently surrounded with cement posts with Underground Radioactive Material signs.

Description: There had been an inner area marked with steel posts, chains and Surface Contamination signs.

The area was surface stabilized in 2001 and is now covered with clean gravel.

Waste Type: Water

The site received the 202-A canyon crane maintenance facility floor, sink, and shower drainage. Waste The site contains less than 1 curie total beta activity. In a letter (Walsar 1966), Isochem **Description:**

Corporation indicates the intent to dispose of 24,600 liters (6,500 gallons) of approximately 50% Soltrol (a brand of purified kerosene) diluent in this crib. BHI-00178 (1995) reports that

investigators were unable to verify if the proposed disposal took place.

Site Code: 216-A-33 **Classification:** Accepted

216-A-33, 216-A-33 Dry Well, 216-A-26B **ReClassification: Site Names:**

Site Type: French Drain **Start Date:** 1955 **Site Status:** Inactive **End Date:** 1964

The 291-AE Filter Building has been built over top of the site where this drain was located. The Site

M21-UD inlet pipe entered the unit 1.5 meters (5 feet) below grade. The french drain had a **Description:**

carbon steel cover.

Process Effluent Waste Type:

The site received the bearing coolant waste from the 291-A-1 Stack electrical exhaust fans. The Waste

waste is low in salt, neutral to basic, and contains less than 1 curie of total beta activity. **Description:**

Site Code: 216-A-35 **Classification:** Accepted

Site Names: 216-A-35 French Drain, 216-A-35 Dry Well ReClassification:

Site Type: French Drain **Start Date:** 1963 **End Date:** 1966 **Site Status:** Inactive

The drain is a raised cement structure, painted yellow and surrounded with Underground Site

Radioactive Material signs. The top cover is marked Confined Space. **Description:**

Waste Type: Water

The site received the seal cooling water from the air sampler vacuum pumps in the 202-A Waste Building. The waste is low in salt, neutral to basic, and contains less than 1 curie of total beta **Description:**

activity.

Site Code: 216-A-38-1 **Classification:** Accepted Site Names: 216-A-38-1, 216-A-38 Crib ReClassification:

Site Type:CribStart Date:Site Status:InactiveEnd Date:

Site The crib is surrounded by light posts and a chain. It is posted with Underground Radioactive

Description: Material signs. There are no concrete AC-540 markers or signs to label the site.

Waste Type: Process Effluent

Waste Although the crib was built to receive PUREX effluent, it was never used.

Description:

SubSites:

SubSite Code: 216-A-38-1:1

SubSite Name: 216-A-38-1:1, 216-A-38-2 Crib

Classification: Rejected

ReClassification:

Description: The 216-A-38-2 Crib was proposed to be built directly south of and adjoining to the 216-A-

38-1 Crib. The 216-A-38-2 Crib was never built.

Site Code: 216-A-41 Classification: Accepted

Site Names: 216-A-41, Crib, 291-AR Stack Drain, 296- ReClassification:

A-13 Stack Drain

Site Type:CribStart Date:1968Site Status:InactiveEnd Date:1974

Site The site is a small crib that is no longer marked or posted. The area where the crib is assumed to

Description: be located is covered with gravel.

Waste Type: Steam Condensate

Waste The site received the 296-A-13 Stack condensate drainage. According to RHO-CD-673, the waste was potentially slightly acidic and contained less than 1 curie total beta activity. Potential contaminants of concern (Stenner) may be tritium, cobalt-60, strontium-90, and cesium-137.

Site Code: 216-B-4 Classification: Accepted

Site Names: 216-B-4, 216-B-4 French Drain, 216-B-4 ReClassification:

Dry Well, 216-B-4 Reverse Well

Site Type:Injection/Reverse WellStart Date:1945Site Status:InactiveEnd Date:1949

Site The site is marked with a single concrete AC-540 marker post, with an Underground Radioactive **Description:** Material sign attached to the post. The top of the well extends 0.6 meters (2 feet) above ground.

Waste Type: Water

Waste Before August 1947, the site received 291-B Stack drainage. After August 1947, the site received floor drainage from the 292-B Building. The waste is neutral to basic and low salt with

less than one curie of total beta contaminants. The B Plant AAMS Report also mentions transuranic fission products.

Site Code: 216-B-13 Classification: Accepted

Site Names: 216-B-13, 216-B-13 French Drain, 291-B ReClassification:

Crib, 216-B-B, 216-B-13 Crib

Site Type:French DrainStart Date:1945Site Status:InactiveEnd Date:1976

Site A single, concrete AC-540 marker is the only site identifier. There an Underground Radioactive

Description: Material sign attached to the concrete post.

Waste Type: Process Effluent

Waste The site received the 291-B-1 Stack drainage. In 6/76, the stack drainage was rerouted to a **Description:** catch tank, jetted to the wind tunnel, drained to a sump, and then pumped to a cell drainage

sample tank. The waste is low in salt and is neutral to basic.

Site Code: 216-B-56 Classification: Accepted

Site Names: 216-B-56, 216-B-56 Crib **ReClassification:** Rejected (1/25/2000)

Site Type:CribStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is enclosed with post and chain and labeled "crib". There are no radiological postings. A site visit on July 29, 1999), found the site surrounded by post and chain and labeled "CRIB". Three risers are visible in the center of the crib. Most of the site soil with some grasses and rabbit brush growing on the surface. There is no evidence that any stabilization has taken place.

The pipeline connection to the unit was not installed. A pipe exits the ground south of the crib and extends vertically above grade approximately 0.9 meters (3 feet). The vertical pipe is labeled 'end of stub.' Well 299-E28-14 (well id A6792) is located northwest of the crib's southwest

corner.

Waste Type: Process Effluent

Waste The site was built but never used. No inventory is listed for the crib.

Description:

Site Code: 216-B-61 Classification: Accepted

Site Names: 216-B-61, 216-B-61 Crib **ReClassification:** Rejected (1/25/2000)

Site Type: Crib Start Date: 1968

Site Status: Inactive End Date:

Site The site is a backfilled crib that has never been used. It appears as a vegetated field. The surface **Description:** is posted as a Contamination Area. The posted contamination has been given the WIDS sitecode

is posted as a Contamination Area. The posted contamination has been given the WIDS sitecode 200-E-105. This contamination is assumed to be the result of wind-blown contamination, since boreholes, sampling, drawings, and process knowledge show that the crib was never used.

Wasta T Ctanas Candanasta

waste Type: Steam Condensate

This crib was built to receive condensate from the ITS (In Tank Solidification) unit, but never Waste

received any waste. It was never used. **Description:**

Site Code: 216-C-2 Classification: Accepted

216-C-2, 291-C Dry Well, 216-C-2 Dry **Site Names: ReClassification:**

Start Date: 1953 **Site Type:** Injection/Reverse Well Inactive End Date: 1988 **Site Status:**

The reverse well is no longer visible. It is not separately marked or posted from the surrounding Site

stabilized area (200-E-41) that is posted as Underground Radioactive Material. **Description:**

Waste Type: Water

Waste The site received 291-C Stack drainage and the seal water drainage from the stack ventilation

filters. The volume discharged to the unit is unknown. The waste is low in salt and is neutral to **Description:**

basic. The site contains less than 1 curie total beta activity.

Site Code: 2704-C-WS-1 **Classification:** Accepted

2704-C-WS-1, 2704-C French Drain, **Site Names: ReClassification:**

Gatehouse French Drain

Start Date: Site Type: French Drain 1949 **Site Status: End Date:** 1998 Inactive

Site

The 2704-C Building was demolished in 1998. The area where the french drain was located is **Description:** now within a larger gravel area that is posted Underground Radioactive Material (URM). The drain is no longer visible at the location described. The drain could be covered with gravel or by the two dumpsters located in the area.

There is a possibility that this site is the same site as that identified in HW-22955 as a quench

tank. The description follows. Steam condensate drained to a quench tank at the southwest corner of the building (2704C). Sanitary waste drains through a 10.2 centimeter (4 inch) cast iron line running beneath the floor slab from the toilet room to a point 1.5 meters (5 feet) west of the building where it connects to a 10.2 centimeter (4 inch) tile drain. The overflow from the quench tank also flows into this tile drain which runs to the sanitary waste disposal field. The sanitary waste disposal field is part of the 2607-E7 Septic System.

(Drawings H-2-4033, H-2-4012, and H-2-4013 identify a quench tank. Drawing H-2-77665 identifies a french drain).

Waste Type: Steam Condensate

Although the drain received building steam condensate, periodically the drain was labeled with Waste

radioactive postings. **Description:**

Site Code: 200-E-4 **Classification:** Accepted

200-E-4, Critical Mass Laboratory Dry **Site Names: ReClassification:** Well North, 209-E North Dry Well,

Miscellaneous Stream #730

Site Type:French DrainStart Date:1958Site Status:ActiveEnd Date:1959

Site The site is a 1.2 meter (4 foot) diameter dry well, covered with a yellow metal cover.

Description:

Waste Type: Steam Condensate

Waste The waste was steam condensate from the steam trap in the valve pit plus steam condensate from

Description: the equipment room.

Site Code: 200-E-25 Classification: Accepted

Site Names: 200-E-25, 272-BB French Drain, Insulation **ReClassification:**

Shop French Drain, Miscellaneous Stream

#659

Site Type:French DrainStart Date:1971Site Status:InactiveEnd Date:1991

The french drain structure is not visible from the surface. The french drain's location is marked with an old sign, mounted on two support posts. The sign says "Asbestos Waste Disposal Site -

Do No Excavate". A sign stating "200-E-25" has been attached to one of the support posts.

Waste Type: Chemicals

Waste Material used in the 272-BB Insulation Shop that possibly could have been flushed into the sink **Description:** or floor drain include: Calcium Silicate, Fiberglass, Silicate, "Airball" (an insulation cover

or floor drain include: Calcium Silicate, Fiberglass, Silicate, "Airball" (an insulation cover material) and latex paint. Prior to 1988, it is possible that organic chemicals, oils and grease may have been introduced into the french drain. A sign posted at the site indicates the presence

of asbestos, which is regulated as a hazardous substance under CERCLA.

Site Code: 200-E-32 Classification: Accepted

Site Names: 200-E-32, 226-B Pad East Side 90-Day ReClassification: Rejected (4/20/2000)

Waste Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:
Site Status: Inactive End Date:

Site This site is a duplicate of 226-B HWSA, according to Fen Simmons, the Environmental **Description:** Compliance Officer for the facility. It was entered into WIDS as a Discovery site in 199

Compliance Officer for the facility. It was entered into WIDS as a Discovery site in 1996 in error. In addition, it was entered at a time when WIDS was required to track <90 Day Storage

Pads. WIDS is no longer required to track these areas per TPA-MP-14

The Site Was Consolidated With:

Site Code: 226-B HWSA

Site Names: 226-B HWSA, 226-B Hazardous Waste Storage Area

Reason: Duplicate Site

Site Code: 200-E-33 Classification: Accepted

Site Names: 200-E-33, PUREX 214-A 90-Day Waste ReClassification: Rejected (9/14/2000)

Accumulation Areas

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1996

Site This 90 day storage area and any residual contamination were removed when PUREX was closed

Description: down and cleaned to meet the deactivation end point criteria prior to transition from

Westinghouse Hanford Co. to Bechtel Hanford Inc. (BHI).

Site Code: 200-E-34 Classification: Accepted

Site Names: 200-E-34, PUREX High Level Waste ReClassification: Rejected (9/14/2000)

Room 90-Day Waste Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1996

Site All 90 day storage pads were removed when PUREX was closed down and cleaned to meet the

Description: deactivation end point criteria prior to transition from Westinghouse Hanford Co. to Bechtel

Hanford Inc. (BHI), per J.D. Showman (e-mail communication, March 2000)

Site Code: 200-E-35 Classification: Accepted

Site Names: 200-E-35, 209-E 90-Day Waste ReClassification: Rejected (9/14/2000)

Accumulation Area, 209-EA

Site Type: Storage Pad (<90 day)

Start Date:

End Date:

Site The site is a concrete pad with a peaked roof supported by beams. The sides are fenced. The east

Description: side of the pad is the Hazardous Material storage area. The west side of the pad is the mixed

waste storage area and is posted as a Radiation Area.

Site Code: 200-E-36 Classification: Accepted

Site Names: 200-E-36, 241-AZ 90-Day Waste ReClassification: Rejected (9/6/2000)

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1993

Site This site has been inactive at least since 1993, according to the current (May 2000) manager of 90

Description: Day Pads for the River Protection Program (RPP). Its previous location is unknown, but only

enclosed conex boxes (self-contained with a spill berm) had been used for 90 Day Storage in the past in the tank farms. This 90 Day Area was moved to RPP's only remaining 90-Day Area, at

209-E (200-E-35) before 1993.

Site Code: 200-E-39 Classification: Accepted

Site Names: 200-E-39, PUREX Room 52, Hood 32 90- ReClassification: Rejected (9/14/2000)

Day Waste Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1996

Site All 90 day storage pads were removed when PUREX was closed down and cleaned to meet the **Description:** deactivation end point criteria prior to transition from Westinghouse Hanford Company (WHC) to

Bechtel Hanford Inc. (BHI), per J. D. Showman (e-mail communication March 2000).

Site Code: 200-E-40 Classification: Accepted

Site Names: 200-E-40, PUREX Sample Gallery 90-Day ReClassification: Rejected (9/14/2000)

Waste Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1996

Site All 90 day storage pads were removed when PUREX was closed down and cleaned to meet the

Description: deactivation end point criteria prior to transition from Westinghouse Hanford Co. (WHC) to

Bechtel Hanford Inc. (BHI).

Site Code: 200-E-50 Classification: Accepted

Site Names: 200-E-50, 284-E Brine Pit, 284-E Salt ReClassification: Rejected (4/20/2000)

Dissolving Pit and Brine Pump Pit

Site Type:SumpStart Date:1942Site Status:InactiveEnd Date:1995

Site The brine pit is no longer visible. It was cleaned out, demolished into itself, and backfilled with

Description: gravel in 1999. It is not marked or posted.

The salt dissolving pits and brine pump pit were part of a single below-grade concrete structure that provided brine for the 284-E Powerhouse.

The two salt dissolving pits each had inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.8 meters (9.25 feet) tall. They had a designed high water line 2.4 meters (7.75 feet) from the pit bottom. An overflow slot connecting the two dissolving pits was located 0.3 meters (1 foot) above the high water line. The bottom of each pit was filled with a 12.7 centimeter (5 inch layer) of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The dissolving pits each had a 2.4 meter (8 foot) by 0.9 meter (3 feet) opening at the top for receiving salt. Each pit had a capacity of 23,600 kilograms (52,000 pounds) of salt.

The brine pump pit was located adjacent to the two salt dissolving pits. The pit was 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.1 meters (7 feet) deep. It held two pumps and associated piping (all brass) for the brine system. The floor of the pump pit sloped toward a 46 by 46 centimeter (18 by 18 by 18 inch) sump in a corner.

Waste Type: Demolition and Inert Waste

Waste The structure was cleaned out, demolished, and buried in place.

Description:

Site Code: 200-E-51 Classification: Accepted

ReClassification: Rejected (4/20/2000)

200-E-51, 284-E Powerhouse Coal Ramp **Site Names:**

Washdown Pit, 200 East Powerhouse Coal

Ramp Washdown Pit, Miscellaneous

Stream 177

Depression/Pit (nonspecific) **Start Date: Site Type:**

Site Status: Inactive **End Date:** 1997

The site is an open pit, partially filled with tumbleweeds and surrounded with metal fence posts Site **Description:** and a broken light chain. A shallow 10-centimeter (4-inch) steel pipe enters the pit from the north.

Waste Type: Water

The pit received effluent pumped from sumps that held coal ramp wash water. Waste

Description:

Site Code: 200-E-55 **Classification:** Accepted

200-E-55, Effluent Drain East of 291-B **ReClassification: Site Names:**

Sand Filter, Miscellaneous Stream #322

Site Type: French Drain **Start Date:** 1948 Inactive **End Date:** 1997 **Site Status:**

Site There are no visual surface features for this drain. It has been marked with a single steel post. **Description:**

The drain is below grade and east of the B-Plant Sand Filter. The french drain consists of a hole

1.83 meters (6 feet) in diameter, 0.9 meters (3 feet) deep backfilled with gravel.

Process Effluent Waste Type:

Waste The drain received condensate from the B-Plant canyon sand filter and rain water that leaked **Description:** through the sand filter roof. An auger drill sample of the sand filter french drain was collected in

September 1994. A spilt spoon sample was collected at 4.8 meters (16 feet) below ground surface. Maximum contamination levels in the soil read 20,000 disintegrations per minute beta/gamma and 2100 disintegrations per minute alpha with hand held instruments. The sample

was shipped to a mobile laboratory for analysis.

Site Code: 200-E-61 **Classification:** Rejected (Proposed)

Site Names: 200-E-61, 202A Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #467

Site Type: Injection/Reverse Well **Start Date: Site Status: End Date:** Active

The site is a circular stormwater drain with a metal-grate cover. The drain is considered to be

Description: active.

Waste Type: Stormwater Runoff

The site receives stormwater runoff from the north side of the PUREX facility. Waste

Description:

200-E-62 **Site Code: Classification:** Accepted **Site Names:** 200-E-62, 202A Building Steam

Condensate, Miscellaneous Stream #71,

Injection Well (Z)

Site Type: Injection/Reverse Well

Site Status: Inactive End Date: 1996

Site The drain has a portion of metal culvert extending above the surface. It has a metal cover with a

ReClassification:

Start Date:

Description: rusty pipe going into it. The steam plant that fed the pipeline that drained condensate to this site

has been shut down and could not be easily re-started.

Waste Type: Steam Condensate

Waste The site received non- contaminated steam condensate.

Description:

Site Code: 200-E-63 Classification: Accepted

Site Names: 200-E-63, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #72, Injection Well

(AA)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The drain is a 1.22 meter (4 foot) diameter, concrete drain with a metal cover.

Description:

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-64 Classification: Accepted

Site Names: 200-E-64, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #69, Injection Well

(W)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The drain is a 0.9 meter (3 foot) diameter concrete drain, covered by a steel plate, with a rusty

Description: pipe going into it from the steam line above.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-65 Classification: Accepted

Site Names: 200-E-65, 202A Building Steam **ReClassification:**

Condensate, Miscellaneous Stream #466

Injection Well (R)

Site Type: Injection/Reverse Well Start Date:

Hanford Site Waste Management Units Report January 2004

Site Status: Inactive End Date: 1996

Site The site is a 1.2 meter (4 foot) diameter concrete drain with a metal plate cover. It is flush with

Description: the ground surface. On October 15, 1998, the inside of the drain was dry.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate. However, the drain is located within an

Description: area that had been posted as a Radiological Contamination Area (see sitecode 200-E-107). A

radiation survey done in October 1998 did not detect any contamination.

Site Code: 200-E-67 Classification: Accepted

Site Names: 200-E-67, 202A Building Steam ReClassification:

Condensate, Miscellaneous Stream #494

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The drain is located inside a dome shaped caisson. The dome shaped caisson is surrounded by **Description:** post and chain and posted with Contamination Area signs. The dome is labeled 202-A-417.

Waste Type: Steam Condensate

Waste The drain is located inside a caisson that is posted as a Contamination Area.

Description:

Site Code: 200-E-68 Classification: Accepted

Site Names: 200-E-68, 291A Control House Steam **ReClassification:**

Condensate, Miscellaneous Stream #59,

Injection Well (L)

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is a 1.2 meter (4 foot) diameter drain with a metal cover. Several disconnected, asbestos

Description: covered steam lines hang above it.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate, but is located inside a posted

Description: Contamination Area.

Site Code: 200-E-69 Classification: Accepted

Site Names: 200-E-69, Line #8801 Steam Condensate, **ReClassification:**

Miscellaneous Stream #56, Injection Well

(A)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

The site is a 1.3 meter (4.5 foot) diameter drain, with a metal cover, located beneath the steam line in the northwest corner of the PUREX complex. The rocks and soil around the drain cover

are stained with rust.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-70 Classification: Accepted

Site Names: 200-E-70, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #64, Injection Well

(Q)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.9 meter (3 foot) diameter drain with four holes in the cover located 2.1 meters (7

Description: feet) east of the steam line. There are several open-ended, cut pipes. It is assumed these pipes once were connected to the drain cover. The cover is posted with Confined Space signs. On May

18, 2000, it was located inside a posted Contamination Area.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate. However, the drain had been located within a large Soil Contamination Area (200-E-107). During a site walkdown in 1998, the RCT

within a large Soil Contamination Area (200-E-107). During a site walkdown in 1998, the RCT found 10,000 disintegration per minute beta/gamma on the steam pipes and in the gravel using a

hand held instrument.

Site Code: 200-E-71 Classification: Accepted

Site Names: 200-E-71, Line #8801 Steam Condensate. **ReClassification:**

Miscellaneous Stream #63, Injection Well

(O)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a man-made hole under the steam line. It is approximately 0.9 meters (3 feet) deep and

Description: 0.61 meters (2 feet) wide. There is no drain structure. The steam vented directly into the soil.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate. However, it had been located inside a

Description: larger area that was posted as a Soil Contamination Area (see sitecode 200-E-103).

Site Code: 200-E-72 Classification: Accepted

Site Names: 200-E-72, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #60, Injection Well

(G)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The drain is adjacent to the abandoned steam line. It is flush with the surrounding grade surface

Description: and has a 0.9 meter (3 foot) diameter metal cover.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-73 Classification: Accepted

Site Names: 200-E-73, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #61, Injection Well

(M)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The site is a 0.9 meter (3 foot) diameter concrete structure with a rusty metal cover.

Description:

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate, but the drain is located within the

Description: boundaries 200-E-103. This area had been a Soil Contamination Area prior to being surface

stabilized in 1999.

Site Code: 200-E-74 Classification: Accepted

Site Names: 200-E-74, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #62, Injection Well

(N)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.9 meter (3 foot) diameter drain with a rusty metal cover. On October 15, 1998, the

Description: inside of the covered drain was inspected. The drain was dry, but rust stained.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate, but is located within an area that had

Description: been posted as a Soil Contamination Area (200-E-103).

Site Code: 200-E-75 Classification: Accepted

Site Names: 200-E-75, Line #8801 Steam Condensate, **ReClassification:**

Miscellaneous Stream #57, Injection Well

(B)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The drain is underneath the steam line. It is a concrete french drain with a 0.9 meter (3 foot) steel

Description: cover.

Wasta Tymas Stoom Condensate

waste type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-76 Classification: Accepted

Site Names: 200-E-76, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #67, Injection Well

(U)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The drain is a concrete structure with a 1.5 meter (5 foot) diameter metal cover. The inside of the

Description: drain is dry with rust colored rocks. It is labeled 2A-501 - Confined Space.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-77 Classification: Accepted

Site Names: 200-E-77, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #65, Injection Well

(S)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

The site is a 1.2 meter (4 foot) diameter concrete structure with a metal cover. The structure is slightly above grade and is filled with rocks. On October 15, 1998, the inside of drain was dry.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate, but is located within an area that had

Description: been posted as a Contamination Area (200-E-107).

Site Code: 200-E-78 Classification: Accepted

Site Names: 200-E-78, Line #8801 Steam Condensate, **ReClassification:**

Miscellaneous Stream #70, Injection Well

(Y

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

The site is a drainage area that received steam condensate from a pipe extending from overhead steam lines. The pipe is attached to the south side of the 203-A building and terminates in cobble

filled depression. No drain structure is visible. The steam pipe terminates into the soil inside a

Contamination Area that surrounds the 203-A building.

Waste Type: Steam Condensate

Waste Although the drain received non-contaminated steam condensate, the point where the steam pipe

Description: terminates into the ground is located inside a posted Contamination Area.

Site Code: 200-E-79 Classification: Accepted

Site Names: 200-E-79, Line #8801 Steam Condensate, **ReClassification:**

Miscellaneous Stream #66, Injection Well

(T)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

The site is a 0.9 meter (3 foot) diameter concrete drain under a steam line with a metal cover.

There is a rusty pipe going into the drain. On October 15, 1998, the inside of the drain was dry.

It was inside a posted Contamination Area.

Waste Type: Steam Condensate

Waste Although the drain received non-contaminated steam condensate, it is located inside and area

Description: that had been a posted Contamination Area (200-E-107).

Site Code: 200-E-80 Classification: Accepted

Site Names: 200-E-80, Line #8801 Steam Condensate, ReClassification:

Miscellaneous Stream #68, Injection Well

(V)

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The site is a gravel area with some rusty pipes going into the ground. No drain structure is visible

Description: from the surface. The site received steam condensate.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-81 Classification: Accepted

Site Names: 200-E-81, MO-035 Facility Water Valve, **ReClassification:**

Miscellaneous Stream #533

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site No drain is visible. The mobile office trailers have been removed. In December of 1997, a layer of clean gravel was laid over the area where the trailers once stood, covering the drain structure.

Waste Type: Water

Waste The drain received water valve drainage from a Mobile Office trailer that has been removed

Description: from the area.

Site Code: 200-E-82 **Classification:** Accepted

Site Names: 200-E-82, Steam Trap 2P, Yard-MSS-TRP-**ReClassification:**

040, Miscellaneous Stream #115

Injection/Reverse Well **Site Type: Start Date:**

Inactive **End Date:** 1997 **Site Status:**

Site The site is a 1.3 meter (4.5 foot) diameter, corrugated metal steam valve pit. It has a metal cover.

Description: There are two valves inside the pit. The pit was dry on the day of the inspection.

Waste Type: Steam Condensate

The site received non-contaminated steam condensate. Waste

Description:

200-E-84 **Site Code: Classification:** Accepted

Site Names: 200-E-84, 202A Building Steam **ReClassification:**

Condensate, Miscellaneous Stream #58,

Injection Well (C)

Injection/Reverse Well **Site Type: Start Date:**

End Date: 1996 **Site Status:** Inactive

The site is a 0.9 meter (3 foot) diameter, gravel filled french drain that received steam condensate. Site **Description:**

The drain is flush with the surrounding gravel surface except for a small lip on one side. A steel

drain pipe extends over the french drain.

Steam Condensate Waste Type:

Waste The drain was installed to receive steam condensate. The Inventory of Miscellaneous Streams **Description:** Report states the steam source has been eliminated and that it is a gravel filled french drain with

no cover, that has a potential to receive stormwater runoff. A site walkdown in 1998 determined the pipe above the drain is a pressure relief valve associated with the PUREX building steam system. The walkdown team believes the drain is not physically located in a location that would

collect stormwater run off.

200-E-85 **Site Code: Classification:** Accepted

200-E-85, 202A Building Pump Seal ReClassification: **Site Names:**

Water, Miscellaneous Stream #459

Site Type: Injection/Reverse Well **Start Date: Site Status:** Inactive **End Date:**

A piece of 1/2 inch diameter PVC pipe extends approximately 0.6 meters (2 feet) out of the Site

ground on the north side of the 2712-A building. No drain is visible at this location. It is assumed **Description:**

that a drain pipe from the 2712-A building may have been previously connected to this PVC pipe. It is also possible Stream ID #459 is a duplicate of 216-A-35, located west of the 2712-A building. 216-A-35 is a 1.5 meter (4 foot) diameter drain extending approximately 0.3 meters (1

foot above ground and is painted yellow.

Waste Type: Water Waste The

Description:

The site received pump seal water.

Site Code: 200-E-88 Classification: Accepted

Site Names: 200-E-88, B Plant Yard Steam Condensate, **ReClassification:**

Miscellaneous Stream #3

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site received steam condensate. It is now a pile of rust colored rocks and broken clay tile

Description: pipe.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-89 Classification: Accepted

Site Names: 200-E-89, B Plant Yard Steam Condensate, ReClassification:

Miscellaneous Stream #4

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.9 meter (3 foot) diameter cement culvert with a rusted metal lid, used for draining

Description: steam condensate.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-90 Classification: Accepted

Site Names: 200-E-90, B Plant Yard Steam Condensate, **ReClassification:**

Miscellaneous Stream #5

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 1 meter (3 foot) diameter concrete culvert, with two steel covers, one covering the

Description: drain and one inside.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-91 Classification: Accepted

Site Names: 200-E-91, B Plant Yard Steam Condensate, **ReClassification:**

Miscellaneous Stream #6

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.6 meter (2 foot) diameter, rock filled drain with no cover. The rocks are rust

Description: stained.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-92 Classification: Accepted

Site Names: 200-E-92, B Plant Yard Steam Condensate, ReClassification:

Miscellaneous Stream #7

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.75 meter (2.5 foot) diameter drain with a fiberglass cover. The site had been

Description: covered with dirt during recent grading activities.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-93 Classification: Accepted

Site Names: 200-E-93, B Plant Yard Steam Condensate, **ReClassification:**

Miscellaneous Stream #8

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The site is a 0.9 meter (3 foot) diameter concrete culvert with a metal cover. Approximately 0.3

Description: meters (1 foot) of the structure is aboveground. The drain structure has been damaged. One side

is broken.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-94 Classification: Accepted

Site Names: 200-E-94, B Plant Yard Steam Condensate, **ReClassification:**

Miscellaneous Stream #9

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site There are no visual surface features for this drain. It was buried under clean gravel when the

Description: water tower and associated steam pipelines were removed. The area is currently being used as an

equipment laydown area.

Waste Type: Steam Condensate

Waste Description:

The site received non-contaminated steam condensate.

Site Code: 200-E-95

Classification: Accepted

Site Names:

200-E-95, 222B Steam Condensate,

am Condensate, ReClassification:

Miscellaneous Stream #308

French Drain

Start Date:

Site Type: Site Status:

Inactive

End Date: 1994

Description:

The site is a 0.4 meter (18 inch) diameter french drain with a blue metal cover. The drain received steam and air conditioner condensate originating from inside the 222-B Building. The place where the source pipe protruded from the concrete block wall above the drain is visible, but

it was cut and capped inside the building.

Waste Type:

Description:

Steam Condensate

Waste

The site received steam condensate and air conditioner condensate. The condensate was batch

discharged during winter.

Site Code:

200-E-97

Classification:

Accepted

1997

Accepted

Site Names:

200-E-97, 212B Building Steam

Condensate, Miscellaneous Stream #470

ReClassification:

Site Type:

French Drain

Start Date:

Site Status:

Inactive

End Date:

Site

The site is a 0.4 meter (18 inch) diameter cement french drain with no lid. The cement drain structure has a cement ring that rises 5 centimeters (2 inches) above the surrounding grade. It is

filled with dirt and is dry.

Waste Type:

Description:

Steam Condensate

Waste

The drain received steam condensate from the 212-B building.

Description:

200-E-98

Classification:

Site Code: Site Names:

200-E-98, 271B Building Ice Machine Overflow, Miscellaneous Stream #490

ReClassification:

Site Type:

French Drain

Start Date:

Site Status:

Inactive

End Date: 1997

Site

Description:

The drain is not visible. A sheet metal shroud and a guard rail have been placed over the area that included the drain to keep small animals from accessing the building where pipes were removed. A portion of the source pipe is visible protruding from the cement block wall above the shroud.

The pipe has been cut and capped.

The shroud was placed over the site to keep stormwater and animals out of the basement of the 271-B Building. When the pipe connecting the air compressors in the basement with the air tanks outside was disconnected (see attached photo, blue structure on right is the tank, blue pipe above is the air pipe), a potential entry point for stormwater and animal entry into the building remained. The steel cover protects the building.

Waste Type: Water

Waste The drain received overflow from an ice machine located inside 271-B.

Description:

Site Code: 200-E-99 Classification: Accepted

Site Names: 200-E-99, Steam Trap 2P-Yard-MSS-TRP-

017, Miscellaneous Stream #570

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site There is no drain structure. It is a low spot in the soil where the steam line discharged steam. The

ReClassification:

Description: rocks and soil are stained with rust. There is a tag on the steam line that identifies it as MSS-TRP-

017.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 200-E-100 Classification: Accepted

Site Names: 200-E-100, Steam Trap 2P-Yard-MSS- ReClassification:

TRP-019, Miscellaneous Stream #571

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is a low spot in the ground under the steam line where steam discharged. The rocks and

Description: soil are slightly stained with rust. There is a tag that identifies it as MSS-TRP-019.

Waste Type: Steam Condensate

Waste Steam was produced from sanitary water that had been sent through a water softener system to

Description: remove minerals (calcium and magnesium).

Site Code: 200-E-102 Classification: Accepted

Site Names: 200-E-102, Contaminated Soil Trench **ReClassification:**

Site Type:TrenchStart Date:1958Site Status:InactiveEnd Date:1958

Site The trench is inside the surface stabilized Underground Radioactive Material area south of

Description: PUREX that is known as WIDS Sitecode 200-E-103. The trench is not separately marked or

posted.

Waste Type: Soil

Waste The waste is contaminated soil caused by the plugging of the 216-A-4 Crib. It resulted in a **Description:** flood of contaminated water in the 291-A Turbine House floor drains. The turbine house floor

was contaminated to 20 rads/hour at 25.4 centimeters (10 inches). An area of ground and blacktop outside the turbine house was contaminated up to 8 rads/hour. The 216-A-4 Crib

received waste solution from the 216-A-2 Waste Collection Tank, the U-3 and U-4 Laboratory Waste Receiver Tanks (located in the acid storage vault), the dissolver off-gas scrubbers and the 241-A-151 Diversion Box Catch Tank. 216-A-4 Crib was intended to receive a maximum of [284 liters (75 gallons) per minute] low level radioactive liquid waste.

Site Code: 200-E-108 Classification: Rejected (9/14/2000)

Site Names: 200-E-108, Well Drilling Laydown Yard Pit ReClassification:

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The site is located within a large chain link fenced area with a locked gate. It is an empty hole in

Description: the ground that has been covered with a piece of plywood.

Site Code: 200-E-119 Classification: Rejected (6/6/2001)

Site Names: 200-E-119, 225-B West Side 90 Day Pad ReClassification:

Site Type: Storage Pad (<90 day) Start Date: 1997
Site Status: Inactive End Date: 2000

Site This site is a discontinued 90 Day Storage Pad. Material had been stored in two, self-contained steel cabinets. When the 90 Day Storage Pad was no longer needed, the empty cabinets were

moved to the 226-B laydown area. There is no visual evidence remaining at the location of where

the cabinets had been located.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

Site Code: 209-E-WS-1 Classification: Accepted

Site Names: 209-E-WS-1, 209-E French Drain ReClassification: Rejected (1/25/2000)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The drain has a metal cover that is painted bright yellow, because it is located in a paved parking **Description:** area. The unit is a french drain that is 1.2 meters (4 feet) in diameter and 2.4 meters (8 feet) deep.

Waste Type: Steam Condensate

Waste The unit received steam trap condensate and steam condensate from 209-E.

Description:

Site Code: 209-E-WS-2 Classification: Accepted

Site Names: 209-E-WS-2, Critical Mass Lab French **ReClassification:**

Drain

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The drain is a 1.2 meter (4 foot) diameter drain in a gravel area southeast of the building. It is

Description: painted with yellow paint and has a metal cover.

Waste Type: Steam Condensate

Waste The waste at the unit includes steam condensate through a collapsed rusted pipe from the Heat

Description: Exchanger located in Room 11 of 209-E and a stainless steel pipe from the clean side of the

HEPA filters.

Site Code: 299-E24-111 Classification: Accepted

Site Names: 299-E24-111, Experimental Test Well Site, **ReClassification:**

Miscellaneous Stream 803

Site Type:Injection/Reverse WellStart Date:1980Site Status:ActiveEnd Date:2000

Site The site is an injection well surrounded by 32 observation wells. The 299-E24-111 injection well

Description: head is located inside a small posted Underground Radioactive Material area. There is a small

Soil Contamination Area (SCA) located southwest of the well. The SCA is where the 5,700 liter

(1500 gallon) above ground solution tank (connected to the well) had been located.

Waste Type: Chemicals

Waste Description:

Eleven 3,780-liter (1,000-gallon) injections of uniform solutions of calcium chloride, calcium nitrate were made into the injection well. Eight injections contained selected radioactive tracers (cesium-134 and strontium-85). Three injections did not contain tracers. In 1995 the injection well was surveyed with a Radiologic Logging System (RLS) down-hole logging probe. No Strontium-85 was identified. Residual cesium-134 peaks were identified at depths between 4.9 and 5 meters (16 and 16.5 feet). The fact that cesium-134 was detected 15 years after injection is an indication of the tracer's high sorption potential. The maximum activity was 0.04 picocuries per gram (pCi/g) at 5 to 5.2 meters (16.5 to 17 feet) below grade level. PNNL scheduled an additional injection experiment at this site in 2000 that added another injection well (10 meters [30 feet] deep) near the center of the cluster, injected a potassium bromide tracer and collected soil cores. Each of the five injections was equal to 4000 liters.

Data were obtained by lowering sensors to the desired depth in observation wells. Sensors used included neutron-neutron moisture probes, geiger-Muller (GM) probes, gamma energy analysis (GEA) probes, and gamma-gamma probes.

Site Code: 2704-E HWSA Classification: Accepted

Site Names: 2704-E HWSA, 2704-E Hazardous Waste ReClassification: Rejected (9/14/2000)

Storage Area

Site Type:Storage Pad (<90 day)</th>Start Date:1985Site Status:InactiveEnd Date:1991

Site The site was an asphalt pad. It is no longer visible. The location is not marked or posted, and the

Description: area is now covered with grass.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Typical liquid wastes contained at the 2704-E Hazardous Waste Staging Area included

Description: antifreeze, grease, diesel fuel, and asphalt.

Site Code: 2718-E-WS-1 Classification: Accepted

Site Names: 2718-E-WS-1, 2718 French Drains ReClassification: Rejected (1/25/2000)

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site consists of two french drains associated with the 2718-E Building. One of the french drains is not visible in the field. It was used to drain a swamp cooler, according to Hanford

drawing H-2-44301. The other french drain is actually a pit used only to drain clean water from the fire sprinkler system at the 2718-E building. It has a metal lid. The inside is dry with a valved

pipe in the bottom.

Waste Type: Water

Waste One french drain receives clean raw water from testing the fire system; the other received water

Description: from a swamp cooler when it was drained for the winter.

Site Code: 216-S-12 Classification: Accepted

Site Names: 216-S-12, UPR-200-W-30, 291-S Stack ReClassification:

Wash Sump, REDOX Stack Flush Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site This site consists of one, single-use liquid waste disposal trench. The site is surrounded with

Description: cement marker posts and chain, posted with "Underground Radioactive Material" signs. It

labeled 216-S-12.

Waste Type: Water

Waste The site received 68,100 liters (18,000 gallons) of flush water from the 291-S (REDOX) Stack.

Description: The water contained ammonium nitrate (600 kilograms). The material contained an estimated

five curies of beta particle emitters and two to three curies of gamma particle emitters that were

predominantly ruthenium and zirconium-niobium. Potential contaminants of concern include cobalt-60, cesium-137, strontium-90, plutonium-239/240, and uranium-238.

Site Code: 216-S-18 Classification: Accepted

Site Names: 216-S-18, 241-SX Steam Cleaning Pit, 216- ReClassification:

S-14 Steam Cleaning Pit

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site The site consists of one backfilled trench. The area has been surface stabilized. It is posted with

Description: light weight chain and "Underground Radioactive Material" signs.

Waste Type: Water

Waste Description:

The site was originally a vehicle decontamination pit. The pit was excavated in 1972. The contaminated material was taken to a 200 West Area burial ground. In 1995 and 1997, the open trench was used to consolidate nearby surface soil contamination. The contaminated soil was covered with 1.8 meters (6 feet) of clean dirt to bring the site up to grade. The area was posted as an "Underground Radioactive Material" area.

Site Code: 216-SX-2 Classification: Accepted

Site Names: 216-SX-2, 216-SX-2 Crib ReClassification:

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1965

Site The crib is currently surrounded by light post and chain and posted with Underground

Description: Radioactive Material signs. It is labeled "216-SX-2" on three sides with old style black and white

signs. It is a gravel filled crib topped with a subsurface layer of Sisalkraft paper.

Waste Type: Steam Condensate

Waste The crib received waste from the 241-SX-701 Compressor House.

Description:

Site Code: 216-T-9 Classification: Accepted

Site Names: 216-T-9, Decontamination Trenches, **ReClassification:**

Equipment Decontamination Area

Site Type:TrenchStart Date:1951Site Status:InactiveEnd Date:1954

Site This site consists of a backfilled trench. The site is no longer marked or posted.

Description:

Waste Type: Water

Waste T Description: c

The site received heavy equipment and vehicle decontamination waste. No radionuclide or chemical contamination has been documented for this site according to DOE/RL-91-61.

However, ARH-2757 states that all contamination (maximum 3000 counts per minute) was buried in the 200 West Dry Waste Burial Ground. Although no cleaning agents are listed, the

possibility of hazardous chemical contamination exists.

Site Code: 216-T-10 Classification: Accepted

Site Names: 216-T-10, Decontamination Trenches, **ReClassification:**

Equipment Decontamination Area

Site Type:TrenchStart Date:1951Site Status:InactiveEnd Date:1954

Site This site consists of a backfilled trench. The site is no longer marked or posted.

Description:

Waste Type: Water

Waste The site received heavy equipment and vehicle decontamination waste. No radionuclide or chemical contamination has been documented for this site according to DOE/RL-91-61.

However, ARH-2757 states that all contamination (maximum 3000 counts per minute) was buried in the 200 West Dry Waste Burial Ground. Although no cleaning agents are listed, the possibility of hazardous chemical contamination exists.

Site Code: 216-T-11 Classification: Accepted

Site Names: 216-T-11, Decontamination Trenches, **ReClassification:**

Equipment Decontamination Area

Site Type:TrenchStart Date:1951Site Status:InactiveEnd Date:1954

Site This site consists of a backfilled trench. The site is no longer marked or posted.

Description:

Waste Type: Water

Waste The site received heavy equipment and vehicle decontamination waste. No radionuclide or chemical contamination has been documented for this site according to DOE/RL-91-61.

However, ARH-2757 states that all contamination (maximum 3000 counts per minute) was buried in the 200 West Dry Waste Burial Ground. Although no cleaning agents are listed, the

possibility of hazardous chemical contamination exists.

Site Code: 216-T-13 Classification: Accepted

Site Names: 216-T-13, 269-W Regulated Garage, 269- ReClassification:

W Decontamination Pit or Trench, 216-T-

12, 269-W Regulated Garage

Decontamination Pit

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1964

Site The site consisted of a single open trench located west of the 269-W Regulated Garage. The

Description: garage has been demolished. Currently, there is a concrete ramp covered with 0.6 meters (2 feet)

of gravel that is visible near the site of the garage. The trench is no longer marked or posted.

Waste Type: Water

Waste The site received vehicle decontamination liquid waste. The inventory prior to the removal of **Description:** 3.06 cubic meters (4 cubic yards) of soil was estimated through 1972 as follows. ARH-2757,

part 3 states the volume was 0.98E+05 liters; <0.100E+00 grams - plutonium; 0.840E+02 curies - beta; 0.100E00 curies - strontium-90; 0.400E+02 curies - ruthenium-106; 0.100E+00 curies - cesium-137; <0.100E+00 curies - cobalt-60; <0.500E-01 kilograms - uranium. ARH-1608 states the volume was 0.026E+06 liters; <0.100E+00 grams - plutonium; 60 curies - beta; 1.00E+00 curies - strontium-90; 40 curies - ruthenium-106; 1.00E+00 curies - cesium-137; <0.100E+00 curies - cobalt-60; <1 pounds of uranium Readings up to 1,500 counts per minute were measured in the excavated soil. Although no cleaning agents are listed, the possibility of

hazardous chemical contamination exists.

Site Code: 216-T-29 Classification: Accepted

Site Names: 216-T-29, 291-T Sand Filter Sewer, 216-T- **ReClassification:**

29 French Drain

Site Type:French DrainStart Date:1949Site Status:InactiveEnd Date:1964

Site The 291-T Sand Filter is located northeast of the 221-T building. The 216-T-29 French Drain is part of the sand filter construction. The sand filter is marked and posted as a Contamination Area.

There is a vent riser protruding through the roof of the northwest corner of the sand filter. This is

assumed to be the location of the drain.

Waste Type: Steam Condensate

Waste The site waste was moisture condensed from canyon air and included 8000 kilograms of nitric **Description:** acid. In the 1950"s, silver reactor filters were added to the stack ducts. They were made of

fiberglass soaked in silver nitrate. The filters reacted with the radioiodine to form silver iodide.

Site Code: 216-T-31 Classification: Accepted

Site Names: 216-T-31, 216-T-31 French Drain ReClassification:

Site Type:French DrainStart Date:1954Site Status:InactiveEnd Date:1962

Site The site consisted of a 0.9 meter (3 foot) diameter french drain. The drain was exhumed and is

Description: no longer marked or posted.

Waste Type: Steam Condensate

Waste The drain was accidentally contaminated by contaminated steam condensate from a blowout

Description: through the steam line during efforts to unplug a waste line in October 1959.

Site Code: 216-T-33 Classification: Accepted

Site Names: 216-T-33, 216-T-33 Crib ReClassification:

Site Type:CribStart Date:1963Site Status:InactiveEnd Date:1963

Site The site is surrounded with light metal posts and chain. It is posted with Underground

Description: Radioactive Material signs. The site consists of a rectangular crib with perforated vitreous clay

inlet pipe set into a gravel layer. A layer of plastic sheeting, clean sand, and backfill are above the

pipe.

Waste Type: Water

Waste The site received equipment decontamination waste from the 2706-T Building. The waste is low **Description:** in salt, neutral to basic, and contains sodium hydroxide. There total effluent discharged to the

crib is questionable, due to the fact that the discharge line plugged shortly after the crib became

active.

Site Code: 216-U-3 Classification: Accepted

Site Names: 216-U-3, 216-U-11, 216-U-3 French Drain ReClassification:

Site Type: French Drain Start Date: 1954

Site Status: Inactive End Date: 1955

Site This site consists of a french drain with light steel posts and chain with "Underground Radioactive

Description: Material" signs. The drain is a 3.6 meter (12 foot) deep, 1.8 meter (6 foot) diameter, rock-filled

excavation with sloping sides and a 10 centimeter (4 inch) diameter vent riser.

Waste Type: Steam Condensate

Waste This 216-U-3 crib received condensate from the steam condensers on the 241-U-104 and 241-U-

Description: 110 tanks. The 241-U-104 and 241-U-110 tanks held REDOX boiling waste. The site waste

contains nitrate. The closed loop cooling water for the condensers was discharged to the 216-U-

14 ditch.

Site Code: 216-U-7 Classification: Accepted

Site Names: 216-U-7, 221-U Counting Box French **ReClassification:**

Drain, 221-U Vessel Vent Blower Pit

French Drain

Site Type:French DrainStart Date:1952

Site Status: Inactive End Date: 1957

Site The french drain is within a larger area that has been stabilized and posted with Underground

Description: Radioactive Material signs. This drain is constructed of a concrete pipe set vertically into the

ground. Gravel fills 1.1 meters (3.5 feet) of the pipe.

Waste Type: Process Effluent

Waste The site received liquid wastes from a counting box floor drain during the metal recovery **Description:** program. The site waste contains nitrate. Due to UPR-200-W-138, it is assumed that 13

kilograms (30 pounds) of uranium in uranyl nitrate hexahydrate (UNH) solution were also introduced to the soil through the 216-U-7 French Drain. However, the release associated with UPR-200-W-138 may be associated with a different french drain. The release information is vague. It is possible the event effected the 216-U-7 French Drain if sufficient liquid volume was

released to the surface to flow southward and reach the 216-U-7 French Drain location.

Site Code: 216-U-13 Classification: Accepted

Site Names: 216-U-13, 216-U-13 Cribs, 216-U-13, ReClassification:

Vehicle Steam Cleaning Pit

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1956

Site This site consisted of two trenches of equal dimensions. The trenches were sloped so that

Description: vehicles could be driven down to the decontamination station at the bottom. The two trenches are

no longer marked or posted. Some debris is visible in the area. The area is not level. Many deep

gullies are located in the area west of the 241-U Tank Farm.

Waste Type: Water

Waste The site used steam and water hoses to remove radioactive contaminants from vehicles,

Description: equipment and pumps from the Uranium Recovery operation. The site waste may include traces

of detergent and nitric acid.

Site Code: 200-W-19 Classification: Rejected (3/29/2002)

Site Names: 200-W-19, Steam Line Asbestos Release **ReClassification:**

Site Type: Unplanned Release Start Date: 1995

Site Status: Inactive End Date:

The site is not marked or posted. It is under a lawn between the M0039 building and a sidewalk.

Description: The site is where asbestos covering a clean steam line was knocked to the ground and cleaned up

by the next day.

Waste Type: Asbestos (friable)

Waste

Description:

Site Code: 200-W-47 Classification: Accepted

Site Names: 200-W-47, 211-T Storage Pad 90-Day ReClassification: Rejected (9/14/2000)

Waste Accumulation Area

Site Type: Storage Pad (<90 day)

Start Date:

End Date:

The 90 day storage area was removed when the T Plant Complex became a Treatment, Storage,

Description: and Disposal (TSD) facility. With the TSD Permit, mixed waste storage for the T Plant Complex was designated to be "a combination of paved and gravel surfaces and is surrounded by the

fencing that encloses the 2706-T Building." An evaluation of the site in April 2000 showed no wastes stored in this area, but signs on the fence indicate that it is occasionally used for waste

storage under the TSD Permit.

Site Code: 200-W-50 Classification: Accepted

Site Names: 200-W-50, 2706-T 90-Day Waste ReClassification: Rejected (9/14/2000)

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:
Site Status: Inactive End Date:

Site The 90 day storage area was removed when the T Plant Complex became a Treatment, Storage, and Disposal (TSD) facility. With the TSD Permit, mixed waste storage for the T Plant Complex

was designated to be "a combination of paved and gravel surfaces and is surrounded by the fencing that encloses the 2706-T Building." An evaluation of the site in April 2000 showed no wastes stored in this area, but signs on the fence indicate that it is occasionally used for waste

storage under the TSD Permit.

Site Code: 200-W-60 Classification: Accepted

Site Names: 200-W-60, 284-W Brine Pit, 284-W Salt ReClassification: Rejected (4/20/2000)

Dissolving Pit and Brine Pump Pit

Site Type:SumpStart Date:1942Site Status:InactiveEnd Date:1995

Site Description:

The brine pit is no longer visible. It was demolished into itself and backfilled with gravel in 1999. It is not marked or posted.

The two salt dissolving pits each had inner dimensions of 4.3 meters (14 feet) long by 2.4 meters (8 feet) wide by 2.8 meters (9.25 feet) tall. They had a design high water line 2.4 meters (7.75 feet) from the pit bottom. An overflow slot connecting the two dissolving pits was located 0.3 meters (1 foot) above the high water line. The bottom of each pit was filled with a 12.7 centimeter (5 inch layer) of 1.3 to 2.6 centimeter (1/2 to 1 inch) gravel topped by a 17.8 centimeter (7 inch) layer of 0.3 to 0.6 centimeter (1/8 to 1/4 inch) gravel. The dissolving pits each had a 2.4 meter (8 foot) by 0.9 meter (3 feet) opening at the top for receiving salt. Each pit has a capacity of 23,600 kilograms (52,000 pounds) of salt.

The brine pump pit was located adjacent to the two salt dissolving pits. The pit was 3.3 meters (10.67 feet) long by 2.2 meters (7.33 feet) wide by 2.1 meters (7 feet) deep. It held two pumps and associated piping (all brass) for the brine system. The floor of the pump pit sloped toward a 46 by 46 centimeter (18 by 18 by 18 inch) sump in a corner.

Waste Type: Demolition and Inert Waste

Waste Description:

The concrete structure was cleaned out, demolished, and buried in place.

Site Code: 200-W-61 Classification: Accepted

Site Names: 200-W-61, 284 Powerhouse Coal Ramp ReClassification: Rejected (4/20/2000)

Washdown Pit, 200 West Powerhouse Coal Ramp Washdown Pit, Miscellaneous

Stream #471

Site Type: Depression/Pit (nonspecific) Start Date:

Site Status: Inactive End Date: 1995

Site The pit is partially filled in with tumbleweeds and surrounded with metal fence posts and a light chain wire. It is adjacent to a concrete pad, which is next to the railroad track and coal off-

loading chute.

Waste Type: Water

Waste The pit received water from the sumps that collected coal ramp washdown water. **Description:**

Site Code: 200-W-65 Classification: Rejected (3/29/2002)

Site Names: 200-W-65, Concrete Vault Northwest of **ReClassification:**

WRAP, Water Pumping Station Vault, Abandoned Water System Pump Vault

Site Type: Control Structure Start Date:
Site Status: Inactive End Date:

Site The structure is in the undeveloped land in the northwest corner of the 200 West Area. It is a **Description:** concrete box measuring approximately 3 meters (10 feet) by 3 meters (10 feet) with a smaller

concrete curbed structure rising from the center. There are two pipe penetrations and a drain in the floor of the box. A steel grate covers the top. There is an electrical conduit penetrating the wall of the structure and a concrete pump pad. It appears to be an old, abandoned water pumping

station for irrigation or dust control.

Waste Type: Misc. Trash and Debris

Waste Concrete

Description:

Site Code: 200-W-74 **Classification:** Rejected (6/6/2001)

Site Names: 200-W-74, 90 Day Storage Area East Side **ReClassification:**

of 622 F

Site Type: Storage Pad (<90 day) **Start Date:** 2000 **Site Status: End Date:** 2000 Inactive

Site This is a duplicate of site 600-267; the site number was used in error.

Description:

The pad, inside a metal shed, has been closed.

Waste Type: Barrels/Drums/Buckets/Cans

Waste

Description:

Site Code: 200-W-107 Classification: Rejected (Proposed)

Site Names: 200-W-107, Miscellaneous Stream #685,

222-U Building Stormwater Runoff

Site Type: Injection/Reverse Well **Start Date: Site Status:** Active **End Date:**

The site is a covered cement french drain which is considered to be active. The yellow metal Site **Description:**

cover has a slot on one side and is level with the surrounding gravel covered ground. No

aboveground pipes were visible extending from the building to the drain. The drain lid is posted

ReClassification:

with a "Contamination Area" sign and a label stating "This is Not a Confined Space".

Waste Type: Stormwater Runoff

Documentation states that the site received stormwater runoff from the east side or backside of Waste **Description:**

the 222-U Building. During the site walkdown, however, it was unclear how the drain received

stormwater because no pipes were observed extending from the building into the drain.

Site Code: 200-W-108 **Classification:** Rejected (Proposed)

200-W-108, Miscellaneous Stream #687, **ReClassification: Site Names:**

222-U Building Stormwater Runoff

Injection/Reverse Well **Site Type: Start Date: Site Status:** Active **End Date:**

The site is a covered cement french drain which is considered to be active. The yellow metal Site

Description: cover has a slot on one side and is level with the surrounding gravel covered ground. There are no postings on the yellow metal cover and no aboveground pipes were visible extending into the drain which is level with the surrounding gravel covered ground. The yellow drain lid was moved to the side, revealing a 0.76 meter (2.5 foot) diameter culvert, approximately 1.2 meters (4 feet) deep. The culvert was dry. No aboveground pipes are currently visible extending to the culvert.

Waste Type: Stormwater Runoff

Waste Documentation states that the site received stormwater runoff from the east side or backside of the 222-U Building. During the site walkdown, however, it was unclear how the drain received

stormwater because no pipes were observed extending from the building into the drain.

Site Code: 200-W-109 Classification: Rejected (Proposed)

Site Names: 200-W-109, Miscellaneous Stream #521, **ReClassification:**

222-U Building Stormwater Runoff

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is a covered cement french drain which is considered to be active. The yellow metal

Description: cover has a slot on one side and is level with the surrounding gravel covered ground. There are no postings on the yellow metal cover and no aboveground pipes were visible extending to the drain.

The drain is ground level and filled with sand.

Waste Type: Stormwater Runoff

Waste Documentation states that the site received stormwater runoff from the east side or backside of the 222-U Building. During the site walkdown, however, it was unclear how the drain could

have received stormwater because no pipes were observed extending from the building into the

drain.

Site Code: 200-W-110 Classification: Discovery

Site Names: 200-W-110, Miscellaneous Stream #393 ReClassification:

Site Type:Injection/Reverse WellStart Date:Site Status:UnknownEnd Date:

Site Unable to locate from the description provided in DOE/RL-88-11.

Description:

Site Code: 200-W-111 Classification: Rejected (Proposed)

Site Names: 200-W-111, Miscellaneous Stream #394, ReClassification:

222-U Building Stormwater Runoff

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is a covered french drain which is considered to be active. The yellow metal cover has a

Description: slot on one side and is level with the surrounding gravel covered ground. It is posted "Not a

Confined Space". The cover is over a 0.61meter (2 feet) diameter VCP by 0.91 meter (3 feet) deep drain structure. No underground piping was observed in the drain, nor aboveground pipes extending to the drain, however a steel pipe was observed on the building. The pipe has been

cutoff approximately 0.61 meters (2 feet) from the ground.

Waste Type: Stormwater Runoff

Waste **Description:**

Documentation states that the site received stormwater runoff from the east side or backside of the 222-U Building. During the site walkdown, however, it was unclear how the drain received

stormwater because no pipes were observed extending from the building into the drain.

200-W-112 **Site Code: Classification:** Accepted

Site Names: 200-W-112, Miscellaneous Stream #52, **ReClassification:**

Steam Condensate

Site Type: Injection/Reverse Well **Start Date:**

Site Status: End Date: 1995 Inactive

Site The site is a 0.9 meter (3 foot) diameter, below ground, cement drain structure. An overhead,

Description: insulated pipe enters the top of the drain structure. The drain is currently located within a posted

radiological Contamination Area.

Waste Type: Steam Condensate

Waste The drain received non- contaminated steam condensate from the 224-U facility. The steam

Description: source has been abandoned.

Site Code: 200-W-113 **Classification:** Accepted

Site Names: 200-W-113, Miscellaneous Stream #54, **ReClassification:**

North Steam Pit

Site Type: Injection/Reverse Well **Start Date:**

1995 **Site Status:** Inactive **End Date:**

The drain structure is covered with a yellow metal lid. The lid is labeled with "North Steam Pit" Site

Description: and "Confined Space" signs. The site is surrounded with metal posts and chain.

Waste Type: Steam Condensate

The site received non-contaminated steam condensate. The steam source has been eliminated. Waste

Description:

Site Code: 200-W-114 **Classification:** Discovery

Site Names: 200-W-114, Miscellaneous Stream #55 **ReClassification:**

Injection/Reverse Well **Site Type: Start Date: Site Status:** Unknown **End Date:**

Unable to located based on the description provided in DOE/RL-88-11. Site

Description:

Site Code: 200-W-115 **Classification:** Accepted

Site Names: 200-W-115, Miscellaneous Stream #138, **ReClassification:**

Steam Condensate MSS-003, 063

Site Type: Injection/Reverse Well **Start Date: Site Status:** Inactive **End Date:**

Site The site is a 5.08 centimeter (2 inch) pipe and three 2.54 centimeter (1 inch) diameter pipes

Description: extending into a broken, 1.2 meter (4 foot) diameter cement french drain structure. The pipe is

labeled as MSS-003.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-116 Classification: Accepted

Site Names: 200-W-116, Miscellaneous Stream #139, ReClassification:

Steam Condensate MSS-TRP-004

Site Type: Injection/Reverse Well Start Date:
Site Status: Inactive End Date:

Site The site is a 0.025 meter (one inch) pipe that emptied into a 1.2 meter (4 foot) deteriorated

Description: cement drain. Tags on the steamline identified it as Steam Trap 004.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-117 Classification: Accepted

Site Names: 200-W-117, Miscellaneous Stream #140, ReClassification:

Steam Condensate MSS-TRP-005

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date:

Site The site is a 0.025 meter (one inch) diameter pipe extending diagonally into a 1.2 meter (4 foot)

Description: diameter cement french drain structure.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-118 Classification: Accepted

Site Names: 200-W-118, Miscellaneous Stream #141, **ReClassification:**

Steam Condensate MSS-TRP-006

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is a 0.025 meter (one inch) diameter insulated pipe extending into a1.22 meter (4 foot)

Description: diameter french drain structure.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-119 Classification: Accepted

Site Names: 200-W-119, Miscellaneous Stream #142, **ReClassification:**

Steam Trap 007

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site includes a 0.76 meter (2.5 foot) diameter cement drain structure. The overhead steam line **Description:** has multiple pipes and flanges extending from the bottom of the steam line. A label is attached to

the flange, stating it is Miscellaneous Steam Trap MSS-TRP-007. One section has been cut and hangs above a drain structure. Another section of insulate pipe runs northward from the flange and has a 2.5 centimeter (1 inch) diameter pipe extending to a hole in the ground, approximately

2 feet north of the cement drain structure.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate. The source has been abandoned.

Description:

Site Code: 200-W-120 Classification: Accepted

Site Names: 200-W-120, Miscellaneous Stream #143, ReClassification:

Miscellaneous Steam Trap 008

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

The site is a 1.8 meter (4 foot) diameter, cement drain structure. A 2.5 centimeter (I inch) pipe **Description:** extends from the flange of the overhead steam line to the drain structure. The site is labeled with

extends from the frange of the overhead steam fine to the drain structure. The site is labeled with

a tag that identifies it as MSS-TRP-008.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-121 Classification: Accepted

Site Names: 200-W-121, Miscellaneous Stream #144, **ReClassification:**

Miscellaneous Steam Trap 009

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date:

Site The site is a 0.025 meter (one inch) diameter pipe extending diagonally into a 0.762 meter (30

Description: inch) diameter cement french drain structure. The drain is filled with rock and dirt. The steam trap

is labeled MSS-TRP-009.

Waste Type: Steam Condensate

Waste The drain received non-contaminated steam condensate.

Description:

Site Code: 200-W-122 Classification: Accepted

Site Names: 200-W-122, Miscellaneous Stream #145, ReClassification:

Miscellaneous Steam Trap 014

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site An overhead steam line crosses the railroad track leading to the REDOX facility. It was

Description: constructed approximately 20 feet above the track. A scaffold has been constructed at the steam

trap location. A tag identifies this location as MSS-TRP-014. A 0,76 meter (2.5 foot) diameter, vitrified clay pipe drain structure is located below the steam line. A 2.54 centimeter (one inch) diameter pipe extends from the overhead steam line to the vitrified clay pipe french drain structure.

Waste Type: Steam Condensate

Waste The site received non-contaminated steam condensate.

Description:

Site Code: 216-Z-13 Classification: Accepted

Site Names: 216-Z-13, 234-5 Dry Well #1, 216-Z-13 **ReClassification:**

Dry Well, Miscellaneous Stream 261, 216-

Z-13 A and B

Site Type:French DrainStart Date:1949Site Status:InactiveEnd Date:1999

Site The site consists of two drain systems. The covered top of the upper french drain is visible on the

Description: surface, adjacent to a single cement marker post with a metal plate labeled 216-Z-13 (also seen in

1985 photograph 122440-250cn).

Waste Type: Steam Condensate

Waste This french drain received emergency condensate from the turbine of the ET-8 exhaust fan, and

Description: 291-Z building steam condensate and floor drainage. Due to the french drain's location low

levels of vadose zone contamination are assumed.

Site Code: 216-Z-14 Classification: Accepted

Site Names: 216-Z-14, 234-5 Dry Well #2, 216-Z-14 **ReClassification:**

Dry Well, Miscellaneous Stream #262, 216-

Z-14 A and B

Site Type: French Drain Start Date: 1949

Site Status: Active End Date:

Site The site consists of two drain systems. The upper drain is marked with a single cement marker post, but the top of the drain has been paved over. The lower drain system is not visible from the

surface. It is located approximately 6 meters (20 feet) southeast of the cement marker post. The lower french drain is constructed of two tile culverts placed end to end, and backfilled beneath 9

feet (2.7 meters) of gravel. Two pipes discharge to the french drain. The culvert is filled with

cobble.

Waste Type: Steam Condensate

Waste The french drain receives emergency condensate and steam condensate from the turbine of the

Description: ET-9 exhaust fan along with 291-Z building steam condensate and floor drainage. Due to the

french drain's location, low levels of vadose zone contamination are assumed.

216-Z-15 **Site Code: Classification:** Accepted

Site Names: 216-Z-15, 234-5 Dry Well #3, 216-Z-15 **ReClassification:**

Dry Well, Miscellaneous Stream #263

French Drain **Start Date:** 1949 **Site Type: Site Status:** Inactive **End Date:** 1997

The 216-Z-15 Dry Well is an inactive, below grade french drain. The site is marked with a single Site concrete marker post that reads "Buried Radioactivity - Do Not Excavate." The marker post is **Description:**

believed to be located directly above the drain structure. The unit is composed of two sections of vitrified clay pipe in a vertical configuration. There is one inlet pipe. The pipe is filled with

cobbles and the upper end is covered with a wood plank.

Process Effluent **Waste Type:**

The site used to receive the drainage from the 291-Z building S-12 Evaporator Cooler. That Waste **Description:**

source was eliminated in May 1997. Low levels of contamination are assumed, due to the

possibility of accidents or unusual events in nearby areas.

216-Z-21 **Site Code: Classification:** Accepted

Site Names: 216-Z-21, 216-Z-21 Seepage Basin, PFP **ReClassification:**

Cold Waste Pond

Site Type: Start Date: 1980 Pond **Site Status:** Inactive **End Date:** 1995

The site is a large soil bermed depression. The basin is currently dry. The site is not Site

radiologically posted. **Description:**

Waste Type: Steam Condensate

Waste The 216-Z-21 basin received effluent from various sources within Z-Plant, including High Tank **Description:**

overflow, storm drain run off, ventilation steam condensate, dry air compressor cooling water and ventilation air wash spray pans. These sources will not contain any radionuclides, organics

or other waste. The storm drains carried some silt and sand.

Site Code: 600-215 Accepted Classification:

Site Names: 600-215, 6265A 90-Day Waste **ReClassification:** Rejected (9/14/2000)

Accumulation Area

Start Date: Site Type: Storage Pad (<90 day) **Site Status:** Active **End Date:**

Site The storage pad is a fenced-in concrete pad covered with an open shed divided into three

Description: sections. The fence is on the east and west sides, and connects to the cinder block walls on the

north and south sides, which holds up the roof. The fence has six gates, two into each section of the pad. The two northernmost sections of the pad are chained off inside the fence and marked as

"Radioactive Materials Area."

The floor of the pad is a metal grate that opens to a concrete basin underneath. This basin is

about 20 centimeters (8 inches) deep, and is designed to catch any leaks. It does not have any other drain, but appears to be large enough to hold the entire contents of several drums, if they should leak. In April 2000, no water (that may have come from natural spring precipitation) was evident in the basin, but a small amount of vegetation debris had collected in a few spots.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Analytical laboratory waste is stored at this site.

Description:

Site Code: 600-254 Classification: Rejected (3/29/2002)

Site Names: 600-254, Abandoned 251-W Substation **ReClassification:**

Mineral Oil Underground Pipelines

Site Type: Product Piping Start Date: 1946

Site Status: Inactive End Date:

Site The Electrical Distribution equipment yard is surrounded by a locked, chain link fence and posted

Description: with "Danger" signs. The ground surface is covered with gravel. Part of the pipeline is visible at

the surface, and has been painted red.

Waste Type: Equipment

Waste In 199 in a ba

In 1996, a section of pipe was removed from the 251-W yard, taken to 212-P, cut up and placed in a barrel. Wipe samples were collected from the outside and inside of the pipe and analyzed at WSCF. All three samples contained less than 1 ppm of PCB and the pipe is considered to be non-PCB material. Since the oil pipeline had been abandoned several years prior to the to the introduction of PCB oil to the Hanford Site, no PCB contaminated oil would have passed through the pipeline.

Site Code: 600-267 Classification: Rejected (6/6/2001)

Site Names: 600-267, Weather Station 90 Day Storage **ReClassification:**

Pad

Site Type:Storage Pad (<90 day)</th>Start Date:2000Site Status:InactiveEnd Date:2000

Site When active, the waste at the 90 Day Pad was stored in steel drums inside a locked metal shed on

Description: the east side of the 622 F Weather Station building.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The waste was stored in steel drums, inside a metal shed on the east side of the 622 F Weather Description: Station. The pad was closed on August 29, 2000. At closure, all dangerous waste and dangerous

waste residues were removed from the containment system. Remaining containers, liners, bases and soil or contaminated residues were decontaminated or removed. No spills occurred at this site. There is no future need for this storage area and the area has been officially closed in

compliance with the closure requirements of WAC 173-303-630(10).

Site Code: 616-WS-1 Classification: Accepted

Site Names: 616-WS-1, 616 NRDWSF French Drain ReClassification: Closed Out (10/24/2001)

Site Type:French DrainStart Date:1986Site Status:InactiveEnd Date:2001

Site This site consists of a perforated concrete pipe set vertically into the ground. The ground surface

Description: is flush with the top of the pipe. The pipe has a layer of gravel at its bottom and a concrete cover over its top. The lid is 10.2 centimeters (4 inches) thick and 1.2 meters (3 feet 10 inches) in

diameter. Two railroad ties lie on opposite sides of the lid.

Waste Type: Stormwater Runoff

Waste The unit received liquid from loading pad collection troughs. The water was sampled to ensure it

Description: met release criteria before being released to the drain.

Site Code: UPR-200-E-13 Classification: Accepted

Site Names: UPR-200-E-13, Overflow from 216-A-4, ReClassification: Rejected (1/25/2000)

UN-200-E-13, UPR-200-E-15

Site Type: Unplanned Release Start Date: 1958

Site Status: Inactive End Date:

Site WIDS site UPR-200-E-13 has been rejected based on documentation that verified it was a **Description:** DUPLICATE of UPR-200-E-15. Future updates and closeout information will only be added to

UPR-200-E-15. This site will no longer be updated.

The unplanned release contaminated both the soil and blacktop areas between the 291-A Turbine

House and the 216-A-4 Crib. The release site was not separately marked or posted.

Waste Type: Process Effluent

Waste The bac bac

The 216-A-4 crib plugged during the jetting of the 216-A-2 catch tank. Contaminated liquid backed up into the 291-A Turbine House floor drains. The floor of the Turbine House was contaminated to 20 rads/hour at 25.4 centimeters (10 inches). The liquid effected an area of ground and blacktop outside the turbine house that was contaminated with beta/gamma levels up to 8 rads/hour.

to 8 raus/flour.

Site Code: UPR-200-E-15 Classification: Accepted

Site Names: UPR-200-E-15, Overflow at 216-A-4, UN- ReClassification: Rejected (1/25/2000)

200-E-15, UPR-200-E-13

Site Type: Unplanned Release Start Date: 1958

Site Status: Inactive End Date:

Site WIDS site UPR-200-E-15 has been consolidated into site 200-E-103, because it was located

Description: within this larger "Underground Radioactive Material" area. Future updates and closeout information will only be added to 200-E-103. This site will no longer be updated.

information will only be usually 200 E 103. This site will no longer be updated.

The release was a liquid unplanned release that contaminated the soil and blacktop areas between the 291-A Turbine House and the 216-A-4 Crib.

Documentation states that the contaminated soil was removed and taken to a trench (WIDS Site 200-E-102) located south of 216-A-4 crib. Contamination could have remained on the blacktop

area. This unplanned release is not separately marked or posted.

Waste Type: Process Effluent

Waste The 216-A-4 crib plugged during the jetting of contaminated liquid from the 216-A-2 Catch **Description:** Tank. When the 216-A-4 crib plugged, the floor drains in the 291-A Turbine House backed up,

contaminating the floor with dose rates up to 20 rads/hour at 25.4 centimeters (10 inches). The liquid then flowed out of the turbine house and contaminated surrounding blacktop and soil. Beta/gamma readings on the blacktop and soil read up to 8 rad/hour were measured immediately

following the incident.

The Site Was Consolidated With:

Site Code: 200-E-103

Site Names: 200-E-103, Radiologically Controlled Area - South Side of PUREX, PUREX Stabilized Area

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-17 Classification: Accepted

Site Names: UPR-200-E-17, Overflow at 216-A-22, **ReClassification:**

UN-200-E-17

Site Type: Unplanned Release Start Date: 1958

Site Status: Inactive End Date:

Site The 216-A-22 crib is marked with a single cement post and posted with Underground Radioactive

Description: Material signs. The unplanned release is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of uranium (from UNH storage) contamination on the ground surface from

Description: the failed 216-A-22 Crib inlet.

Site Code: UPR-200-W-30 Classification: Accepted

Site Names: UPR-200-W-30, 216-S-12, UN-200-W-30 ReClassification: Rejected (1/25/2000)

Site Type: Trench Start Date:
Site Status: Inactive End Date:

Site WIDS site UPR-200-W-30, has been rejected based on documentation that verified it was a

Description: DUPLICATE of 216-S-12. Future updates and closeout information will only be added to 216-S-

12. This site will no longer be updated.

The site was surrounded with a light chain and "Underground Radioactive Material" signs. A concrete marker post was labeled 216-S-12. The surface was sand and gravel with no vents or

evidence of subsidence.

Waste Type: Water

Waste The site received 68,100 liters (18,000 gallons) of flush water from the 291-S (REDOX) Stack.

Description: The water contained ammonium nitrate (600 kilograms). The material contained an estimated

five curies of beta particle emitters and two to three curies of gamma particle emitters that were predominantly ruthenium and zirconium-niobium. Potential contaminants of concern include

cobalt-60, cesium-137, strontium-90, plutonium-239/240, and uranium-238.

Site Code: UPR-200-W-138 Classification: Accepted

Site Names: UPR-200-W-138, 221-U Vessel Vent ReClassification:

Blower Pit French Drain, UN-216-W-11, UN-200-W-138, UN-200-W-22, UPR-200-

W-22

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site The site was described as the ground near the R-3 entrance to the 221-U Building. The area has **Description:** been surface stabilized and posted with Underground Radioactive Material signs. The Unplanned

Release is not separately marked or posted.

Waste Type: Process Effluent

Waste An estimated 140 kilograms (300 pounds) of uranium nitrate hexahydrate (UNH) solution, containing 14 kilograms (30 pounds) of uranium, was released to the ground through the French

Drain. The information for this release is vague. Some documentation indicates the french drain involved was the 216-U-7, but drawing reviews indicate the blower pit is located north of 216-U-7. The blower pit drained to the 241-WR vault. If the event involved surface liquid being released, it is possible it flowed southward and could have effected the 216-U-7 drain.

200-NO-1

212-N **Classification:** Accepted **Site Code:**

Site Names: 212-N, 212-N Building, Metal and Fuel **ReClassification:**

Storage Basin Facility, 212-N Fissile

Storage Facility

1945 **Site Type:** Storage **Start Date:**

Site Status: Inactive **End Date:**

The building is composed of high bay, a fuel storage basin and a heater room. Each section has a Site **Description:** concrete slab and roof and walls constructed of concrete and concrete block. Exterior dimensions

of the high bay section is 8.2 by 23 by 9 meters (27 by 74 by 30 feet) high. The fuel storage basin section is 15 by 22 by 3.7 meters (49 by 72 by 12 feet) high. The heater room is 4.3 by 7.9 by 3.7 meters (14 by 26 by 12 feet) high. The total area is 555 square meters (5,970 square feet), the storage basin is 307 square meters (3,300 square feet), and the transfer basin is 37 square meters

(400 square feet).

Waste Type: Equipment

Waste From 1944 to 1952, the facility was used to provide underwater storage of irradiated slugs from **Description:** the 100 Areas. Slugs were stored in the 6.1-meter (20-feet) reinforced concrete basins. In 1970,

twenty four boxes of transuranic (TRU) contaminated laboratory hoods and equipment from the 300 Area Plutonium Recycle Test Reactor (PRTR) were placed in the facility for storage. There is estimated to be 40 gram (1.4 ounces) of plutonium (byproduct). The total waste volume is 2.7

cubic meters (7,651 cubic feet).

Site Code: 212-P **Classification:** Accepted

Site Names: 212-P, 212-P Building PCB Storage **ReClassification:**

Facility, 212-P Storage Facility

1945 **Site Type:** Storage **Start Date:**

Site Status: Active **End Date:**

Site The building is composed of two main sections (High Bay and low roof sections) and a heater

Description: room. Each section has a concrete slab floor and walls constructed of concrete and concrete

> block. A site visit on November 6, 1998 found that the High Bay section does not have any warning signs or radiological postings. There is a yellow "PCB" sign on the door of the storage room, located on the east side of the facility. The Basin Storage section of the building (northeast portion of the facility) is posted with a Contamination Area sign and a Danger sign. PCB

> contaminated equipment that was previously stored outside the southwest corner of the facility has

been removed.

Waste Type: Oil

Waste Since 1982, this unit has held PCBs, and PCB-contaminated waste (nonradioactive) in temporary (up to 9 months) storage, according to TSCA (Toxic Substance Control Act). **Description:**

Radioactively contaminated PCBs are stored in another area of this unit. Waste types include 854 kg oil less than 50 p/M PCB; 1,348 kg oil greater than 50 p/M PCB; 703 PCB light ballasts, overpacked; 1,159 kg oil greater than 500 p/M PCB; 7 sealed transformers with less than 30 p/M PCB oil; 1 capacitor with 1% PCB askarel fluid; 11 low-voltage capacitors with greater than 50 p/M PCB oil; 2 electron microscope power supplies with greater than 50 p/M PCB oil; and 42 kg regulated solvents with greater than 500 p/M PCB. Drained items (as allowed under TSCA)

are occasionally stored on an asphalt pad at the southwest corner of the building.

Waste Type: Equipment

Originally, the unit was built to provide underwater storage of irradiated slugs from the 100 Waste

Description: Areas. Slugs were stored in the 20-ft reinforced concrete basins.

Site Code: 212-R **Classification:** Accepted

Site Names: 212-R, 212-R Storage Facility **ReClassification:**

1945 **Site Type:** Storage **Start Date:** 1952 **Site Status:** Inactive **End Date:**

The building is composed of two main sections (the High Bay and the basin storage section) and a Site

heater room. Each section has a concrete slab foundation and roof. The walls are constructed of **Description:**

concrete and concrete block

Waste Type: Equipment

Waste The building and equipment within it may be contaminated. A 1988 Internal Memo related to **Description:**

the Strontium SemiWorks HEPA Filter 2 stored at 212-R states that the filter contains 9.0 mCi

of Sr-90 and 185 uCi of Cs-137.

Accepted **Site Code:** 600-211 **Classification:**

Site Names: 600-211, State Approved Land Disposal **ReClassification:**

Site, SALDS, 616A, 616-A

1995 **Site Type:** Drain/Tile Field **Start Date:**

End Date: Site Status: Active

The site is surrounded by steel posts/chain and posted as "SALDS Building 616A Disposal Site Field". The cobble terrain is flat with primarily cheatgrass cover. There are seven 5-in plastic **Description:**

pipes (monitoring ports) that extend two to three feet above grade and one 30-in sampling access manhole that extends one foot above grade. Two feet below grade in the gravel disposal bed are sixty-six perforated 4-in diameter distribution laterals branching 90 degrees from an 8-in diameter feed header. A geotextile and PVC membrane cover the disposal field and are one foot below

grade.

Waste Type: Process Effluent

Treated and verified liquid waste received from the 200 Area Effluent Treatment Facility (ETF). Waste

Description: The waste meets the delisting requirements of the 216 permit ST 4500 and is considered

nondangerous; however it may contain tritium.

200-PO-2

Site Code: 202-A HWSA Classification: Accepted

Site Names: 202-A HWSA, 202-A Hazardous Waste ReClassification: Rejected (9/6/2000)

Storage Area

Site Type:Storage Pad (<90 day)</th>Start Date:1986Site Status:InactiveEnd Date:1996

Site All remaining 90 day storage areas were removed when PUREX was closed down and cleaned to

Description: meet the deactivation end point criteria prior to transition from Westinghouse Hanford Co. to

Bechtel Hanford Inc. (BHI).

Waste Type: Barrels/Drums/Buckets/Cans

Waste When this unit was active, typical wastes contained in the staging area over a 1-year period included approximately 1,000 kilograms (2,205 pounds) of flammable waste oils, 1,900

included approximately 1,000 kilograms (2,205 pounds) of flammable waste oils, 1,900 kilograms (4,190 pounds) of combustible waste oils, and 1,600 kilograms (3,530 pounds) of

wastes unidentified prior to receipt of analysis.

Site Code: 202-A NU Classification: Accepted

Site Names: 202-A NU, 202-A Neutralization Unit, **ReClassification:**

Elementary Neutralization Unit/202-A

Building, PUREX

Site Type: Neutralization Tank Start Date: 1986

Site Status: Active End Date:

Site

Description:

Waste Type: Process Effluent

Waste The system treats process condensate. A nominal flow 2.7E+05 liters (72,000 gallons) per day, **Description:** is neutralized in line from a pH of between 1 and 2 to a pH of approximately 4 by addition of

iption: is neutralized in line from a pH of between 1 and 2 to a pH of approximately 4 by addition of potassium hydroxide. This stream then passes through a 26,500-liter (7,000-gallon)

underground tank containing 27 metric tons (30 tons) of calcium carbonate rock (installed January 1987) for neutralization to a final pH of between 6 and 7. It is then discharged to the

216-A-45 Crib.

Site Code: 202-A-E-F11 Classification: Accepted

Site Names: 202-A-E-F11, 202-A-TK-E-F11, PUREX ReClassification:

Tank E-F11

Site Type: Storage Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 9,840-liter (2,600-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste Description:

The unit contains ammoniacal (ammonia based) radioactive mixed waste (RMW) which is processed with sodium hydroxide (NaOH) and sodium nitrate (NaNO3). Prior to September 1987, these wastes were sent to the 216-A-36B Crib. Currently, the waste is discharged to Tank G7 for neutralization.

Site Code: 202-A-E5 Classification: Accepted

Site Names: 202-A-E5, 202-A-TK-E5, PUREX Tank E5 ReClassification:

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 18,900-liter (5,000 gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains: 1) decladding wastes; 2) metathesis wastes; or 3) miscellaneous wastes

Description: including flushes with similar chemical makeups. Wastes are neutralized with sodium nitrate

(NaNO3) and potassium hydroxide (KOH) or sodium hydroxide (NaOH) before going to double-

shell underground storage tanks.

Site Code: 202-A-F15 Classification: Accepted

Site Names: 202-A-F15, 202-A-TK-F15, PUREX Tank ReClassification:

F-15

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 18,900-liter (5,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains high-level acid wastes which are neutralized with sugar, sodium hydroxide (NaOH), and sodium nitrite (NaNO2) before going to double-shell underground storage tanks.

Site Code: 202-A-F16 Classification: Accepted

Site Names: 202-A-F16, 202-A-TK-F16, PUREX Tank ReClassification:

F16

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 18,900-liter (5,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains high-level acid wastes which are neutralized with sugar, sodium hydroxide **Description:** (NaOH), and sodium nitrite (NaNO2) before going to double-shell underground storage tanks.

Site Code: 202-A-F18 Classification: Accepted

Site Names: 202-A-F18, 202-A-TK-F18, PUREX Tank ReClassification:

F18

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 18,900-liter (5,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains miscellaneous wastes collected from all sections of the plant. The dangerous **Description:** wastes consist mainly of nitric acid (HNO3). The wastes are neutralized with sodium hydroxide

(NaOH) and sodium nitrite (NaNO2) to a pH greater than 12.5 before going to double-shell

underground storage tanks.

Site Code: 202-A-G7 Classification: Accepted

Site Names: 202-A-G7, 202-A-TK-G7, PUREX Tank **ReClassification:**

G7

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 53,000-liter (14,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit receives ammonia distillate from Tank E-F11 and is neutralized with sodium hydroxide **Description:** (NaOH) and sodium nitrite (NaNO2) before going to double-shell underground storage tanks.

Site Code: 202-A-U3 Classification: Accepted

Site Names: 202-A-U3, 202-A-TK-U3, PUREX Tank ReClassification:

U3

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 30,280-liter (8,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains miscellaneous wastes collected from all sections of the plant. The dangerous wastes consist mainly of nitric acid (HNO3). The wastes are neutralized with sodium hydroxide

(NaOH) and sodium nitrite (NaNO2) to pH of greater than 12.5 before going to double-shell

underground storage tanks.

Site Code: 202-A-U4 Classification: Accepted

Site Names: 202-A-U4, 202-A-TK-U4, PUREX Tank ReClassification:

U4

Site Type: Neutralization Tank Start Date: 1956

Site Status: Inactive End Date:

Site The unit has a 30,280-liter (8,000-gallon) capacity.

Description:

Waste Type: Process Effluent

Waste The unit contains miscellaneous wastes collected from all sections of the plant. The dangerous wastes consist mainly of nitric acid (HNO3). The wastes are neutralized with sodium hydroxide

(NaOH) and sodium nitrite (NaNO2) to pH of greater than 12.5 before going to double-shell

underground storage tanks.

Site Code: 202-A-WS-1 Classification: Accepted

Site Names: 202-A-WS-1, PUREX Waste Piles ReClassification:

Site Type: Storage Start Date: 1956

Site Status: Inactive End Date:

Site This site is located in the PUREX Building on the canyon deck and F-Cell canyon floor.

Description:

Waste Type: Equipment

Waste Description:

Th PUREX Containment Building is permitted for the storage of waste designated TCLP toxic for lead (D008), cadmium (D006), and chromium, (D007) and toxic (WT01). Discarded process equipment removed from service in the PUREX Plant and known to have shielding, weights, and or counterweights containing elemental cadmium or lead was stored on the canyon deck within the containment building. However, this waste has been removed and placed on a burial box inside the PUREX Storage Tunnel 2. In November 1996, chromium contaminated concrete solids from the E-Cell floor were stored in F-Cell within the containment building as well as a lead-lined remote camera assembly on the West Crane Maintenance Platform.

Site Code: 205-A Classification: Accepted

Site Names: 205-A, 205-A Silica Gel Facility ReClassification:

Site Type:Process Unit/PlantStart Date:1956Site Status:InactiveEnd Date:1976

Site The site is 2.4 meters (8 feet) high building constructed of transite, with nine tanks of various

Description: sizes inside the facility.

Waste Type: Process Effluent

Waste The unit contains silica gel and process and flush solutions. The amount of radionuclides **Description:** present is not known. There is less than 2,000 counts/minute smearable beta/gamma; 5

millirad/hour nonpenetrating, 1 millirem/hour penetrating and detectable alpha. The tanks are

assumed to contain silica gel and may contain either process or flush solutions.

Site Code: 211-A NU Classification: Accepted

Site Names: 211-A NU, 211-A Neutralization Unit, **ReClassification:**

Elementary Neutralization Unit/211-A

Building, PUREX

Site Type:Neutralization TankStart Date:1986Site Status:InactiveEnd Date:1990

Site

Description:

Waste Type: Chemicals

Waste Approximately 318 kilograms (700 pounds) per year of 9% sulfuric acid is combined with 272 **Description:** kilograms (600 pound) per year of sodium hydroxide within the water demineralizer columns

during regeneration.

Site Code: 296-A-13 Classification: Accepted

Site Names: 296-A-13, 291-AR Filter Building Stack ReClassification:

Site Type: Stack Start Date:

Site Status: Inactive End Date: 1997

Site Description:

The site is a process effluent stack that was part of the 244-AR Canyon Exhaust Ventilation System (K-3). The stack is mounted on a buried concrete stand. The stack is equipped with a galvanized steel ladder, a stainless steel breech, a cleanout access, two stainless steel monitoring holes, 7.6 centimeters (3 inches) and 20.3 centimeters (8 inches), and spray rings. When the stack is operating, the exit temperature is 25.6 degrees Centigrade (78 degrees Fahrenheit) and exit velocity is 5 meters per second (16.4 feet per second). The stack has been plugged with grout and has not operated since 1997.

Waste Type: Process Effluent

Waste Description:

The site received condensate and air exhaust from the 291-AR Filter Building. According to RHO-CD-673 (reference to 216-A-41 Crib), the waste was potentially slightly acidic and contained less than 1 curie total beta activity. Potential contaminants of concern (Stenner) may be tritium, cobalt-60, strontium-90, and cesium-137.

WHC-SD-EN-RPT-007 states that radionuclide inventory is based on levels for "very high removable contamination" (WHC-CM-1-6) assuming worst case alpha (amercium-241) and beta (strontium-90/yttrium-90) as representative nuclides. The level of contamination is assumed to be uniformly distributed over all ventilated surface areas. For americium-241 the contamination is 2,000 disintegrations per 100 square centimeters (dpm/100^2) and total activity of 0.00021 curies. For strontium-90 the contamination is 100,000 disintegrations per 100 square centimeters (dpm/100^2) and total activity of 0.0105 curies. For yttrium-90 the contamination is 100,000 disintegrations per 100 square centimeters (dpm/100^2) and total activity of 0.0105 curies.

DOE/RL-94-51 lists the total alpha as 0.000000023 curies. Total beta is listed as 0.00000036

curies.

Site Code: 200-E-44 Classification: Accepted

Site Names: 200-E-44, PUREX Railroad Cut ReClassification:

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The Railroad Cut is approximately 240 meters (800 feet) of track extending from the tunnel door

Description: northward to the isolation area gate. Two large berms of soil were placed along both sides of the

track within the fenced portion of the spur to provide radiation shielding. A turnout siding (Donkey Track) is also located within the fenced Railroad Cut. The cut is posted as a

Contamination Area.

Waste Type: Soil

Waste The contamination in the soil and gravel in the railroad cut is from many years of contaminated

Description: equipment and waste being transported on rail cars into and out of the PUREX facility.

Site Code: 200-E-136 Classification: Accepted

Site Names: 200-E-136, 202-A TSD, PUREX ReClassification:

Site Type: Process Unit/Plant Start Date: 1956
Site Status: Active End Date: 1990

Site Description:

This site is the entire PUREX Treatment, Storage, and Disposal (TSD) facility. It includes the individual tanks that had been provided separate WIDS codes; they are to be consolidated into this site. The PUREX Storage Tunnels are a separate TSD and are not a part of this site.

The main part of the facility is the 202-A Building, in which the fuels were reprocessed. It is a reinforced concrete structure, 1,005 feet by 119 feet by 100 feet high (306 meters by 36 meters by 30 meters), with about 40 feet (12 meters) of the height below grade. The building consists of three main structural components: (1) a thick-walled concrete 'canyon' in which the equipment for radioactive processing is contained in cells below grade; (2) a pipe, sample, and storage gallery section; and (3) a steel and transite annex that houses offices, process control rooms, laboratories, and the building services.

The portion of the canyon below grade is sub-divided into a row of 12 process equipment cells paralleled by a ventilation air tunnel and pipe tunnel through which intercell solution transfers are made. The air tunnel exhausts the ventilation air from the cells to the main ventilation filters and stack.

Waste Type: Equipment

Waste Description:

Some of the waste remaining in the facilities include lead (in paint, light bulb contacts, shielding, pipe joints, washers affixing transite), mercury (thermostats and switches), asbestos (transite siding, insulation, gaskets), organic substances (greases and residues in gearboxes and bearings), PCBs (transformers, ballasts, lubricants, oils), cadmium (dissolver moderator lining in canyon cells), and silver (silver reactor in cells), chromium (in cell debris).

Site Code: 200-E-140 Classification: Rejected (Proposed)

Site Names: 200-E-140, Gravel Pit 32 ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Active End Date:

Site The site is an open excavation.

Description:

--- -- ~ .

Waste Type: Soil

The site is a source of backfill material. No waste is stored at this site. Waste

Description:

Site Code: 218-E-14 **Classification:** Accepted

Site Names: 218-E-14, PUREX Tunnel No. 1, PUREX **ReClassification:**

Storage Tunnel

Site Type: Storage **Start Date:** 1960 1965 **Site Status:** Inactive **End Date:**

Site PUREX Tunnel Number 1 is an extension of the railroad tunnel, extending south of the east end

of the 202-A Building. It is an enclosed, above ground storage facility. It is approximately 109 **Description:** meters (358 feet) long, 5.8 meters (19 feet) wide, and 6.9 meters (22.5 feet) high. The railroad tracks have a one percent downgrade to the south. The tunnel is ventilated by an absolute filtered

exhauster at the south end of the tunnel.

Waste Type: Equipment

Waste This site received extremely large, heavy or highly contaminated waste equipment stored on **Description:**

eight railroad flatcars. The volume of waste on the rail cars ranges from 53 to over 168 cubic meters (1,900 to over 6,000 cubic feet). The curie content decayed through 1990 was 945.3 of cesium -137, 845.2 of strontium -90 and 0.0684 of ruthenium-106. Railcars 1&2 contain a HA column and jumpers with approximately 2400 curies of radioactive material. Railcar 3 contains a failed E-F11, 1WW waste concentrator with approximately 40,000 curies of radioactive material. Railcar 4 contains a G-2 centrifuge with approximately 3,000 curies of radioactive material. Railcar 5 contains a failed E-H4 waste concentrator with approximately 1,000 curies of radioactive material. Railcar 6 contains a failed E-F6, 2WW waste concentrator with approximately 700 curies of radioactive material. Railcar 7 contains a second failed E-F11, 1WW waste concentrator with approximately 40,000 curies of radioactive material. Railcar 8 contains a spare failed, waste concentrator with approximately 700 curies of radioactive material. 230 kilograms of lead is associated with the material on the railcars.

Site Code: 218-E-15 **Classification:** Accepted

Site Names: 218-E-15, PUREX Tunnel No. 2, PUREX **ReClassification:**

Storage Tunnel

Site Type: Storage **Start Date:** 1967 1996 **Site Status:** Inactive **End Date:**

The above grade tunnel is covered with soil. The railroad tracks have a one percent downgrade to Site the south end of the tunnel. The tunnel is constructed of a bituminous coated steel liner attached **Description:**

to external reinforced concrete. The tunnel is ventilated by a filtered exhauster at the south end of the tunnel. The water has been removed from the "water filled" door and the tunnel door has been

sealed.

Waste Type: Equipment

The unit received extremely large, heavy or highly-contaminated waste equipment stored on Waste railroad flat cars. The tunnel has the capacity to hold 40 railcars. As of June 1996, 28 railcars **Description:**

had been placed in the tunnel. The tunnel contains an estimated total of 2,730,000 curies of

radionuclides and 762 grams (27 ounces) of plutonium. In addition to radioactive

contaminants, the equipment stored in the tunnel also contains lead, silver, mercury, cadmium,

chromium, barium and oil.

200-PO-3

216-A-16 Accepted **Site Code: Classification:**

216-A-16, 216-A-16 Dry Well **ReClassification: Site Names:**

Site Type: French Drain **Start Date:** 1956 1969 **Site Status:** Inactive **End Date:**

The unit is composed of bell-end concrete pipe, 1.8 meters (6 feet) long, placed vertically 3.4 Site meters (11 feet) below grade. The unit is rock-filled with a 1.9-centimeter (3/4-inch) carbon-steel

Description: cover. A 5-centimeter (2-inch) steel vent riser extends 0.9 meters (3 feet) from the top. There is a carbon steel inlet pipe, approximately 0.6 meters (2 feet) long coming from the 216-A-17 French

Drain.

Waste Type: Water

Waste The site received the floor drainage and the 296-A-11 Stack drainage from the 241-A-431 **Description:**

Building. The waste is low in salt, neutral to basic, and contains less than 10 curies total beta

activity.

216-A-17 **Site Code: Classification:** Accepted

216-A-17, 216-A-17 Dry Well **Site Names: ReClassification:**

French Drain **Start Date:** 1956 **Site Type: Site Status:** Inactive **End Date:** 1969

The unit is composed of bell-end concrete pipe, 1.8 meters (6 feet) long, placed vertically 3.3 Site **Description:** meters (11 feet) below grade. The unit is rock-filled with a carbon steel cover. The side slope of

the excavation is assumed to have been 1:1.

Waste Type: Water

Waste The site received the floor drainage and the 296-A-11 Stack drainage from the 241-A-431 **Description:**

Building. The waste is low in salt, neutral to basic, and contains less than 1 curie total beta

activity.

Site Code: 216-A-23A **Classification:** Accepted

ReClassification: Site Names: 216-A-23A, 216-A-23-A French Drain

French Drain 1957 **Site Type: Start Date: Site Status:** Inactive **End Date:** 1969

Site The unit is a 1.07-meter (3.5-foot) diameter, 1.8-meter (6-foot) long bell-end concrete pipe,

Description: placed vertically 1.98 meters (6.5 feet) below grade. The concrete pipe is filled with 0.9 meters

(3 feet) of rock and has a carbon steel cover. A 5.1-centimeter (2-inch) carbon steel vent riser extends from the top to 0.9 meters (3 feet) above grade. A Schedule 80 steel inlet pipe enters

approximately 2.7 meters (9 feet) below grade.

Waste Type: Process Effluent Waste **Description:** The site received the deentrainer tank condensate and the back flush waste from the 241-A-431 Building. The waste is low in salt, neutral to basic and contains less than 50 curies total beta activity. The total amount discharged by this waste stream, 6,000 liters (1,580 gallons), applies to both A-23A and A-23B.

Site Code: 216-A-23B **Classification:** Accepted

Site Names: 216-A-23B, 216-A-23-B French Drain **ReClassification:**

Site Type: French Drain **Start Date:** 1957 1969 **Site Status:** Inactive **End Date:**

The unit is a 1.07-meter (3.5-foot) diameter, 1.8-meter (6-foot) long bell-end concrete pipe, Site placed vertically 1.98 meters (6.5 feet) below grade. The unit is filled with 0.9 meters (3 feet) of **Description:**

rock and has a carbon steel cover. The side slope is assumed to be 1:1.

Waste Type: Process Effluent

The site received the deentrainer tank condensate and the backflush waste from the 241-A-431 Waste **Description:**

Building. The waste is low in salt, neutral to basic and contains less than 5 curies total beta activity. Total waste stream discharge was 6,000 liters (1,580 gallons) to the 216-A-23A and

216-A-23B French Drains.

216-A-39 **Site Code: Classification:** Accepted

216-A-39, 216-A-39 Crib, 216-A-39 Trench ReClassification: **Site Names:**

Site Type: Crib **Start Date:** 1966 **Site Status:** Inactive **End Date:** 1966

Site The site consists of a crib and two trenches dug from the north door of the 241-AX-801-A

Building. The trenches extended to the brow of the north hill, then over the hill to the flat ground **Description:**

below. The trenches continued eastward 27.45 meters (90 feet). Later, a pipeline was added that

connected the 241-AX-801-B building to the 216-A-39 crib.

Drawing H-2-33295 shows the crib structures. Each crib has three SCH 40 pipes. The drawing also states the crib was covered with approximately 6 meters (20 feet) of dirt in 1973. The risers

were extended above the new grade in May 1973.

Waste Type: Process Effluent

Waste The site originally received waste from a radioactive spill in the 241-AX-801-A Building (June **Description:**

1966). The maximum dose rate from this release was 5 rad per hour at a distance of 3 meters

(10 feet). Later, the crib received floor drainage via a pipeline from the 241-AX-801-B building.

Site Code: 241-A-A **Classification:** Accepted

241-A-A, 241-A-A Diversion Box, 241-A-**Site Names: ReClassification:**

A Structural Valve Pit

1974 **Site Type:** Valve Pit **Start Date:**

Site Status: End Date: Active

Site The unit is an underground structure with reinforced concrete walls, floor, and cover blocks.

Description:

Waste Type: Process Effluent

Waste The 241-A Tank Farm valve pits are used to route wastes to and from the 242-A Evaporator;

Description: 241-AN, 241-AY, and 241-AZ Tank Farms; PUREX; and the 244-A DCRT. The 204-

AR Facility is connected to 241-A-A only. Transfers from 244-A may include cross-site, 244-

CR, and B-Plant wastes.

Site Code: 241-A-B Classification: Accepted

Site Names: 241-A-B, 241-A-B Diversion Box, 241-A- ReClassification:

B Structural Valve Pit

Site Type: Valve Pit Start Date: 1974

Site Status: Active End Date:

Site The unit is an underground reinforced concrete structure with walls, a floor, and cover blocks.

Description:

Waste Type: Process Effluent

Waste The 241-A Tank Farm valve pits are used to route wastes to and from the 242-A Evaporator;

Description: 241-AN, 241-AY, and 241-AZ Tank Farms; PUREX; and the 244-A DCRT.

Transfers from 244-A may include cross-site, 244-CR, and B-Plant wastes.

Site Code: 241-A-101 Classification: Accepted

Site Names: 241-A-101, 241-A-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is

Description: located below grade for shielding. This is a-third generation tank with an increased operating

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Waste Activity in Tank 241-A-101 began when it was filled with PUREX high-level waste and organic

Description: wash waste in 1956. Activity ceased when the tank was deactivated in November 1980.

Site Code: 241-A-102 Classification: Accepted

Site Names: 241-A-102, 241-A-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is

Description: located below grade for shielding. This is a third-generation tank with an increased operating

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Waste **Description:** Tank 241-A-102 was filled with PUREX waste in 1956. The tank was declared deactivated in November 1980 and intrusion prevention was completed during 1982. The tank was interim stabilized in August 1989 after most of the supernatant was pumped. The tank waste is classified as double-shell slurry feed.

Site Code: 241-A-103 Classification: Accepted

241-A-103, 241-A-TK-103 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1956 **Site Status:** Inactive **End Date:** 1980

The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is Site located below grade for shielding. This is a third-generation tank with an increased operating **Description:**

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Tank 241-A-103 was filled with self-concentrating PUREX waste from 1956 until 1969. Tank Waste

Description: 241-A-103 was declared inactive in August 1980.

241-A-104 **Site Code: Classification:** Accepted

Site Names: 241-A-104, 241-A-TK-104 **ReClassification:**

Single-Shell Tank **Start Date:** 1958 **Site Type:** 1975 **Site Status:** Inactive **End Date:**

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is located below grade for shielding. This is a third-generation tank with an increased operating **Description:**

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Waste The tank contains non-complexed waste.

Description:

Site Code: 241-A-105 **Classification:** Accepted

ReClassification: 241-A-105, 241-A-TK-105 **Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1962

Site Status: Inactive **End Date:**

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is **Description:**

located below grade for shielding. This is a third-generation tank with an increased operating

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Waste The waste in this tank is non-complexed.

Description:

Site Code: 241-A-106 Classification: Accepted

Site Names: 241-A-106, 241-A-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1957Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is

Description: located below grade for shielding. This is a third-generation tank with an increased operating

depth and a flat (instead of dished) bottom.

Waste Type: Storage Tank

Waste Tank 241-A-106 received deentrained waste and condensate waste from the boiling waste tanks in the A Tank Farm from 1957 to 1960. The waste is classified as concentrated phosphate.

Site Code: 241-A-152 Classification: Accepted

Site Names: 241-A-152, 241-A-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1956Site Status:InactiveEnd Date:1980

Site This diversion box is a reinforced concrete structure containing four stainless steel transfer pipes

Description: and adequate space to allow for jumper replacement activities. The major portion of the diversion

box is below grade with concrete cover blocks and lifting hooks.

Waste Type: Process Effluent

Waste Waste transferred through 241-A-152 includes fuel decladding waste, organic wash waste, sump **Description:** waste, and laboratory waste. Lead shielding may also be contained inside the diversion box.

Waste Type: Equipment

Waste The diversion box contains lead shielding.

Description:

Site Code: 241-A-153 Classification: Accepted

Site Names: 241-A-153, 241-A-153 Diversion Box, ReClassification:

241-A-153 Transfer Station

Site Type:Diversion BoxStart Date:1956Site Status:InactiveEnd Date:1985

Site This diversion box is a reinforced concrete structure sized to accommodate the pipes and provide space for jumper replacement. The 241-A-153 is one type of diversion box, known as a transfer

space for jumper replacement. The 241-A-153 is one type of diversion box, known as a transfer box. It connects one common pipe to several others, one at a time, uses only one jumper and has

the several nozzles arranged in a circle about the common nozzle.

Waste Type: Process Effluent

Waste This unit contains PUREX high level waste, and PUREX organic wash waste. Lead shielding

Description: may also be contained inside the diversion box.

Waste Type: Equipment

Waste This unit contains lead shielding.

Description:

Site Code: 241-A-350 Classification: Accepted

Site Names: 241-A-350, 241-A-350 Catch Tank, 241-A- ReClassification:

350 Drainage Lift Station

Site Type: Catch Tank Start Date: 1956

Site Status: Active End Date:

The unit is an underground reinforced concrete pump pit, with a cover block. The pump pit

Description: drains any leaks from the pump through the pump pit floor drain to an 800-gallon (3000-liter)

stainless steel tank below.

Waste Type: Storage Tank

Waste This unit contains aging PUREX high-level waste, PUREX acid concentrator waste, organic

Description: wash waste, and 241-A-207 Retention Basin solution.

Site Code: 241-A-417 Classification: Accepted

Site Names: 241-A-417, 241-A-417 Condensate Tank **ReClassification:**

Site Type: Catch Tank Start Date: 1956

Site Status: Inactive End Date:

Site This unit is an underground cylindrical concrete vault lined with an all welded steel liner. Two

Description: overflow lines near the top of the vault prevent overflow of the tank. Above the tank are two

rectangular pits, a pump pit and a valve pit. The floor of both pits slope to drains that empty to

the tank.

Waste Type: Steam Condensate

Waste This unit collects condensate for the 241-A-702 process condensate, the 241-A-401 process

Description: condensate, and the 241-AZ-154 steam condensate.

Site Code: 241-A-431 Classification: Accepted

Site Names: 241-A-431, 241-A-431 Ventilation ReClassification:

Building, 241-A-431 Tank Farm

Ventilation Building

Site Type:Process Unit/PlantStart Date:1955Site Status:InactiveEnd Date:1969

Site The unit is a concrete structure, with the lower portion below grade. The unit is divided into two

Description: sections. One section houses the ventilation equipment. The other section houses the de-

entrainment equipment. The building is 8 meters (25 feet) high, with the lower 4.9 meters (16

feet) below grade.

Waste Type: Equipment

Waste The unit contains radioactively contaminated equipment and concrete. It provided off-gas de-

Description: entrainment for the 241-A Tank Farm and also received the 296-A-11 Stack drainage.

Site Code: 241-A-702-WS-1 Classification: Accepted

Site Names: 241-A-702-WS-1, 702-A Drain Lines ReClassification:

Site Type:French DrainStart Date:1968Site Status:InactiveEnd Date:1995

Site The unit is a french drain that received steam condensate from the 241-A-702 Ventilation

Description: Building.

Waste Type: Steam Condensate

Waste The unit received steam condensate from the 241-A-702 Ventilation Building.

Description:

Site Code: 242-A Classification: Accepted

Site Names: 242-A, 242-A Evaporator ReClassification:

Site Type: Evaporator Start Date: 1977

Site Status: Active End Date:

Site The 242-A Building contains the evaporator vessel, supporting process equipment, and the

Description: principal process components of the evaporator-crystallizer system. The building comprises two adjoining, structurally independent structures, designated A and B. Structure A houses the

processing and service areas while structure B houses operating and personnel support areas.

Waste Type: Chemicals

Waste Waste types include: dilute non-complexed radioactive waste, PUREX dilute miscellaneous

Description: waste, PUREX cladding removal waste, and complexed radioactive waste. Hazardous

chemicals used include: sodium nitrate used to regenerate ion exchange column, sodium hydroxide used for decontamination applications, and the antifoam agent used in the evaporator

vessel.

Site Code: 244-A DCRT Classification: Accepted

Site Names: 244-A DCRT, 244-A Double-Contained **ReClassification:**

Receiver Tank, 244-A RT, 244-A Receiver

Tank, 244-A-TK/SMP

Site Type: Receiver Tank Start Date: 1975

Site Status: Active End Date:

Site The unit is an underground structure constructed of carbon steel. It sits vertically inside a

Description: reinforced concrete, steel-lined vault. Above the tank is the lift station 244-A LS.

Waste Type: Chemicals

Waste The 244-A Double-Containment Receiver Tank is located at the 244-A lift station and provides lag storage for waste transferred from the 241-ER-153 diversion box to the 241-A valve pits.

Waste routed through the lift station includes 200 West Area waste; 241-B, 241-BX, 241-BY, and 241-C Single-Shell Tank waste; and waste transferred from B Plant. Waste transferred out of the 244-A lift station can be routed to any of the 200 East Area Double-Shell Tanks.

Site Code: 244-A LS Classification: Accepted

Site Names: 244-A LS, 244-A Lift Station, 244-AR Lift ReClassification:

Station, 244-AR LS

Site Type: Control Structure Start Date: 1975

Site Status: Active End Date:

Site The lift station is surrounded with a chain link fence. The surface is covered with gravel. The

Description: unit consists of an underground concrete structure containing a filter pit, pump pit, and vault in which the catch tank (244-A DCRT) is installed. This site includes the exhaust fan and stack,

instrument enclosure, caisson, flush pit, service pit, and vacuum pump pad.

Waste Type: Process Effluent

Waste The 244-A Double-Containment Receiver Tank is located at the 244-A Lift Station and provides **Description:** lag storage for waste transferred from the 241-ER-153 diversion box to the 241-A valve pits.

Waste routed through the lift station includes 200 West Area waste; 241-B, 241-BX, 241-BY, and 241-C Single-Shell Tank waste; and waste transferred from B Plant. Waste transferred out

of the 244-A lift station can be routed to any of the 200 East Area Double-Shell Tanks.

Site Code: 241-AN-A Classification: Accepted

Site Names: 241-AN-A, 241-AN-A Diversion Box ReClassification:

Site Type: Valve Pit Start Date: 1981

Site Status: Active End Date:

Site This valve pit is fabricated of reinforced concrete. This valve pit accommodates pipes and

Description: jumpers and nozzles that go to different tanks. The valve pit is below grade with the cover block

a few inches above grade.

Waste Type: Process Effluent

Waste This unit contains non-complexed waste, double-shell slurry waste, B Plant low-level waste, and

Description: PUREX low-level waste.

Site Code: 241-AN-B Classification: Accepted

Site Names: 241-AN-B, 241-AN-B Diversion Box ReClassification:

Site Type: Valve Pit Start Date: 1981

Site Status: Active End Date:

Site This valve pit is fabricated of reinforced concrete. This valve pit accommodates pipes and

Description: jumpers and nozzles that go to different tanks. The valve pit is below grade with the cover block

a few inches above grade.

Waste Type: Process Effluent

Waste The unit contains non-complexed waste, double-shell slurry waste, B Plant low level waste, and

Description: PUREX low level waste.

Site Code: 241-AN-101 Classification: Accepted

Site Names: 241-AN-101, 241-AN-TK-101 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-101 began service by receiving non-complexed waste from PUREX in September 1981. Non-complexed waste was received and transferred through this tank until September

1990 when it began receiving dilute non-complexed waste. During this time, the tank also received low-level waste from B Plant, decontamination waste from N Reactor, and dilute non-complexed waste from the 200 East Area Single-Shell Tanks. As of March 1994, the tank was receiving only dilute non-complexed waste. The tank is an active dilute receiver tank which

receives non-complexed salt well waste.

Site Code: 241-AN-102 Classification: Accepted

Site Names: 241-AN-102, 241-AN-TK-102 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-102 began service by receiving non-complexed waste from Tank 241-SY-102 in

Description: September 1981. The tank received non-complexed waste until December 1982. The tank

received complexant concentrate waste from January 1983 until October 1983. From November 1983 until June 1984, the tank again received non-complexed waste. During 1984, the tank received low-level waste from PUREX. The tank received complexant concentrate waste from Tank 241-AW-101 from July 1984 until 1992 and has not received any waste since 1992. The

tank is considered a concentrated waste holding tank.

Site Code: 241-AN-103 Classification: Accepted

Site Names: 241-AN-103, 241-AN-TK-103 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved, primary steel liner and a nonstress-

Description: relieved outer steel liner, both inside the reinforced concrete shell. The top of the dome was

placed below grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-103 began service by receiving non-complexed waste from Tank 241-SY-102 in

Description: September 1981. The tank received non-complexed waste until February 1984. During 1983, the tank received low-level waste from B Plant and dilute non-complexed waste from the 200-

East Area single shell tanks. The tank received double-shell slurry feed waste from March 1984 until April 1986. Since May 1986, the tank has contained double-shell slurry waste. The tank has not received any waste, other than wash water, since 1986. The tank is considered a

concentrated waste holding tank.

Site Code: 241-AN-104 Classification: Accepted

Site Names: 241-AN-104, 241-AN-TK-104 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-104 began service by receiving non-complexed waste in September 1981. The **Description:** majority of the waste was sent from Tank 241-AW-102 during 1982. The tank continued to

majority of the waste was sent from Tank 241-AW-102 during 1982. The tank continued to receive non-complexed waste until November 1982. The tank has contained double-shell slurry feed waste from December 1982 until the present. During 1983, the tank also received low-level waste from PUREX. The tank has not received waste since 1985. The tank is considered a

concentrated waste holding tank.

Site Code: 241-AN-105 Classification: Accepted

Site Names: 241-AN-105, 241-AN-TK-105 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-105 began service by receiving non-complexed waste in September 1981. The

Description: tank continued to receive non-complexed waste until November 1982. The tank received

double-shell slurry feed waste from Tanks 241-AW-102 and 241-AN-104 from December 1982 until 1985, when waste reception ceased. The tank is considered a concentrated waste holding

tank.

Site Code: 241-AN-106 Classification: Accepted

Site Names: 241-AN-106, 241-AN-TK-106 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-106 began service by receiving non-complexed waste in September 1981. The tank continued to receive non-complexed waste until January 1983. From February 1983 until

February 1984, the tank received concentrated customer waste. The tank contained Hanford facility waste from March 1984 until May 1990. From June 1990 until the present, the waste contained in the tank has been designated as phosphate waste. The tank has not received any waste, other than wash water, since 1984. The supernatant was pumped to Tank 241-AP-102

during 1992. The tank is considered a concentrated waste holding tank.

Site Code: 241-AN-107 Classification: Accepted

Site Names: 241-AN-107, 241-AN-TK-107 ReClassification:

Site Type: Double-Shell Tank Start Date: 1981

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome was placed below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AN-107 began service by receiving non-complexed waste in September 1981 from

Description: Tank 241-AN-102. The tank continued to receive non-complexed waste until June 1983. From July 1983 until the present, the tank has contained complexant concentrate waste, most of which

was received from Tank 241-AZ-102 during 1983. The tank has not received any waste since

1986. The tank is considered a concentrated waste holding tank.

Site Code: 241-AP VP Classification: Accepted

Site Names: 241-AP VP, 241-AP Valve Pit ReClassification:

Site Type: Valve Pit Start Date: 1986

Site Status: Active End Date:

Site The cover block is made in two sections. The valve pit has a floor drain that empties to tank 241-

Description: AP-103. On the east end of the pit is a jumper storage area separated from the process side by a

wall. The jumper storage area has 10 gage stainless steel liner on the floors and walls. The floor drain is in both the process and storage sides of the valve pit. It is not initially encased from the floor, but is encased as it leaves the valve pit area. All concrete and ferrous materials are treated

with protective coating.

Waste Type: Equipment

Waste

The AP Tank Farm began receiving waste in July 1986. The waste consisted of non-complexed waste, Hanford Site facilities waste, double-shell slurry waste, low-level waste from PUREX, **Description:**

and N Reactor decontamination waste.

Site Code: 241-AP-101 **Classification:** Accepted

241-AP-101, 241-AP-TK-101 **Site Names: ReClassification:**

1986 **Site Type:** Double-Shell Tank **Start Date:**

End Date: **Site Status:** Active

The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon Site

steel. The primary tank is carbon steel located within the secondary liner. The tanks are **Description:**

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Storage Tank Waste Type:

Tank 241-AP-101 began service by receiving non-complexed waste in July 1986. During 1987, Waste

1988, and 1989, the tank received waste from PUREX. The tank received non-complexed waste **Description:** until May 1990. From June 1990 until the present, the tank has contained dilute non-complexed

waste. The tank has not received any waste since the fourth quarter of 1989. The tank is currently an active dilute receiver tank containing waste that is being concentrated by the 242-A

Evaporator.

Site Code: 241-AP-102 **Classification:** Accepted

241-AP-102, 241-AP-TK-102 **ReClassification: Site Names:**

1986 Double-Shell Tank **Start Date: Site Type:**

Site Status: Active **End Date:**

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon **Description:**

steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AP-201 began service by receiving Hanford facility waste in July 1986. The tank

received Hanford facility waste until May 1990. During 1988 and 1989, waste was transferred **Description:**

> from the tank to the grout vaults. The tank received waste from PUREX during the third and fourth quarters of 1989. The tank has contained dilute non-complexed waste since June 1990. The tank has not received any waste since 1992. The tank is currently an inactive, grout feed

tank containing excess water from the grout facility.

241-AP-103 **Classification: Site Code:** Accepted

Site Names: 241-AP-103, 241-AP-TK-103 **ReClassification:**

Site Type: Double-Shell Tank **Start Date:** 1986

Site Status: End Date: Active

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon **Description:**

steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Tank 241-AP-103 began service by receiving non-complexed waste in July 1986. The tank Waste **Description:**

received non-complexed waste until May 1990. The tank received waste from PUREX during the first, second, and third quarters of 1988. From June 1990 until the present, the tank has contained dilute non-complexed waste. The tank has not received waste since 1991. The tank is

currently an inactive dilute receiver tank.

Site Code: 241-AP-104 **Classification:** Accepted

Site Names: 241-AP-104, 241-AP-TK-104 **ReClassification:**

Double-Shell Tank 1986 **Site Type: Start Date:**

Site Status: Active **End Date:**

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon

Description: steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 241-AP-104 began service by receiving Hanford Facility waste in July 1986 and continued

receiving this waste until May 1990. The tank received decontamination waste from N Reactor **Description:**

> from the first quarter until the third quarter of 1987. From June 1990 until the present, the tank contained dilute non-complexed waste. Currently, the tank is an inactive grout feed tank.

Site Code: 241-AP-105 **Classification:** Accepted

241-AP-105, 241-AP-TK-105 **ReClassification: Site Names:**

Site Type: Double-Shell Tank **Start Date:** 1986

End Date: Site Status: Active

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon

steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Description:

Tank 241-AP-105 began service by receiving non-complexed waste in July 1986. The tank Waste

received non-complexed waste until June 1989. From July 1989 until the present, the tank has **Description:**

contained double-shell slurry feed waste. The tank has not received waste since 1989. The tank

is currently an inactive concentrated waste holding tank.

Site Code: 241-AP-106 Accepted **Classification:**

Site Names: 241-AP-106, 241-AP-TK-106 ReClassification:

Site Type: Double-Shell Tank Start Date: 1986

Site Status: Active End Date:

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon

Description: steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Waste Tank 24-AP-106 began service by receiving Hanford Facility waste in July 1986. The tank continued to receive Hanford Facility waste until September 1986. From October 1986 until

May 1990, the tank received non-complexed waste. From June 1990 until the present, the tank has contained dilute non-complexed waste. The tank has not received waste since 1989. The

tank is currently an inactive dilute receiver tank.

Site Code: 241-AP-107 Classification: Accepted

Site Names: 241-AP-107, 241-AP-TK-107 ReClassification:

Site Type: Double-Shell Tank Start Date: 1986

Site Status: Active End Date:

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon

Description: steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Waste The 241-AP-107 began service by receiving double-shell slurry feed waste in July 1986. The

Description: tank received double-shell slurry feed waste until September 1986. From October 1986 until May 1990, the tank received non-complexed waste. The tank received waste form PUREX during 1990. The tank has contained dilute non-complexed waste from June 1990 until the

present. The tank has not received waste since 1990. The tank is currently an active dilute receiver tank containing waste that is being concentrated by the 242-A Evaporator.

Site Code: 241-AP-108 Classification: Accepted

Site Names: 241-AP-108, 241-AP-TK-108 ReClassification:

Site Type: Double-Shell Tank Start Date: 1986

Site Status: Active End Date:

Site The tank is a double-shell tank with an outer structure of reinforced concrete lined with carbon

Description: steel. The primary tank is carbon steel located within the secondary liner. The tanks are

separated by an annular space. The tank is placed on a concrete foundation. The dome is below

grade for shielding.

Waste Type: Storage Tank

Waste Description:

The tank has contained dilute non-complexed waste from June 1990 until the present. The tank is currently an active dilute receiver tank with waste that is being concentrated by the 242-A Evaporator. From 1990 until 1992, the tank received waste from PUREX. From October 1986 until May 1990, the tank received non-complexed waste. Tank 241-AP-108 began service by receiving double-shell slurry feed waste in July 1986, and continued to receive this waste until September 1986.

Site Code: 204-AR Classification: Accepted

Site Names: 204-AR, 204-AR Waste Unloading Station **ReClassification:**

Site Type: Loading Dock Start Date: 1982

Site Status: Active End Date:

Site The 204-AR Unloading Facility is a reinforced concrete structure.

Description:

Waste Type: Storage Tank

Waste The unit receives wastes generated from decontamination and regeneration operations in the 100 **Description:** and the 200 Areas; from recovery, fuels fabrication, and laboratory operations in the 200 and the

300 Areas; and from decontamination operations in the 400 Area. The waste is chemically adjusted in-line during pump-out to double-shell underground storage tanks to meet corrosion

specifications.

Site Code: 241-AR-151 Classification: Accepted

Site Names: 241-AR-151, 241-AR-151 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1976

Site Status: Inactive End Date:

Site The 241-AR-151 diversion box is a reinforced concrete structure. The walls and floor of the diversion box are lined with 11-gage stainless steel. The box drains to the 244-AR Vault and is

equipped with a leak detector that alarms in 242-A.

Waste Type: Process Effluent

Waste The diversion box is used to transfer waste from the 241-AY and 241-AZ Tank Farms. This

Description: waste includes aging waste, high-level B Plant waste, B Plant cesium feed waste, non-

complexed, concentrated complexed and cesium and strontium recovery waste.

Site Code: 244-AR VAULT Classification: Accepted

Site Names: 244-AR VAULT, 244-AR Vault ReClassification:

Site Type:Receiving VaultStart Date:1966Site Status:InactiveEnd Date:1978

Site The 244-AR Vault facilities include a canyon building, a service building, a filter building, and a change room. The canyon building is a reinforced concrete, two level, multi-cell structure. The

lower process cells contain four tanks and a failed equipment cell, while the upper cells contain the associated piping and equipment. The upper and lower cells are separated by cover blocks

with recessed lifting bails.

Waste Type: Storage Tank

Waste The 244-AR Vault was originally used to process radioactive waste that was being removed ("sluiced") from storage tanks. The waste was eventually transferred to the B Plant for removal

of cesium and strontium.

Site Code: 241-AW-A Classification: Accepted

Site Names: 241-AW-A, 241-AW-A Valve Pit, 241- ReClassification:

AW-A Diversion Box

Site Type: Valve Pit Start Date: 1980

Site Status: Active End Date:

Site The 241-AW valve pits are fabricated from reinforced concrete. The cover block for each pit is

Description: made in two sections. Each valve pit has a floor drain. Drain lines empty into tank 241-AW-

102. All concrete and ferrous materials are treated with protective coating.

Waste Type: Process Effluent

Waste Low-level PUREX waste, complexant concentrate waste, complexed waste and dilute non-

Description: complexed waste, and non-complexed waste was received and distributed to all tanks via this

diversion box.

Site Code: 241-AW-B Classification: Accepted

Site Names: 241-AW-B, 241-AW-B Valve Pit, 241-AW- ReClassification:

B Diversion Box

Site Type: Valve Pit Start Date: 1980

Site Status: Active End Date:

Site The 241-AW valve pits are fabricated from reinforced concrete. The cover block for each pit is

Description: made in two sections. Each valve pit has a floor drain. Drain lines empty into tank 241-AW-

102. All concrete and ferrous materials are treated with protective coating.

Waste Type: Process Effluent

Waste Low-level PUREX waste, complexant concentrate waste, complexed waste and dilute non-

Description: complexed, double-shell slurry waste, and non-complexed waste was received and distributed to

all tanks via this diversion box.

Site Code: 241-AW-101 Classification: Accepted

Site Names: 241-AW-101, 241-AW-TK-101 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Description:

Tank 241-AW-101 began service by receiving non-complexed waste in July 1980. The tank continued to receive non-complexed waste until November 1981, and again from December 1982 until March 1983. From December 1981 until November 1982, the tank received dilute double-shell slurry feed waste. The tank received complexant concentrate waste from April 1982 until June 1984. From July 1984 until April 1986, the tank again received non-complexed waste. The tank received waste from PUREX and dilute non-complexed waste from the 200-East Area Single-Shell Tanks from 1984 until 1986. The tank contained double-shell slurry feed waste from May 1986 until the present. The tank has not received waste since 1986. The tank is currently an inactive concentrated waste holding tank.

Site Code: 241-AW-102 Classification: Accepted

Site Names: 241-AW-102, 241-AW-TK-102 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Description:

Tank 241-AW-102 began service by receiving non-complexed waste in July 1980. The tank received non-complexed waste until May 1983. The tank received evaporator feed waste from June 1983 until December 1984. During 1983 and 1984, the tank received dilute non-complexed waste from the 200-East Area Single-Shell Tanks. Between January 1985 and April 1986, the tank received Hanford Facility waste. From May 1986 until May 1990, the tank received non-complexed waste from other Double-Shell Tanks. The tank has contained dilute non-complexed waste from June 1990 until the present. The tank is currently an active, evaporator feed tank for the 242-A Evaporator.

Site Code: 241-AW-103 Classification: Accepted

Site Names: 241-AW-103, 241-AW-TK-103 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Description:

Tank 241-AW-103 began service by receiving non-complexed waste in July 1980. From August 1980 until November 1981, the tank received double-shell slurry feed waste. The tank received PUREX waste from 1983 until 1988. From December 1981 until March 1983, the tank received dilute double-shell slurry feed waste. During April and May 1983, the tank received non-complexed waste from June 1983 until May 1990. From June 1990 until the present, the tank has contained dilute non-complexed and PUREX neutralized cladding removal waste. The tank has not received waste since 1992. The tank is currently an inactive dilute receiver tank.

Site Code: 241-AW-104 Classification: Accepted

Site Names: 241-AW-104, 241-AW-TK-104 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Tank 241-AW-104 began service by receiving non-complexed waste in July 1980. The tank received non-complexed waste until July 1981, and again from October 1982 until May 1990.

During August, September, and October 1981, the tank received complexant concentrate waste. From November 1981 to September 1982, the tank received complexed waste. The tank contained non-complexed waste from October 1982 until May 1990. The tank received waste from PUREX from 1986 until 1991. From June 1990 until the present, the tank has contained dilute non-complexed waste. The tank has not received waste since the third quarter of 1992.

Currently, the tank is an inactive dilute receiver tank.

Site Code: 241-AW-105 Classification: Accepted

Site Names: 241-AW-105, 241-AW-TK-105 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Tank 241-AW-105 began service by receiving non-complexed waste in July 1980. The tank received complexant concentrate waste from August 1980 until May 1983. The tank received

waste from PUREX from 1983 until 1988. From June 1982 until May 1990, the tank received non-complexed waste. During July 1986, the tank received double-shell slurry feed waste. From June 1990 until the present, the tank has contained dilute non-complexed waste and

PUREX neutralized cladding removal waste. The tank is currently an active, dilute receiver tank

receiving waste from PUREX.

Site Code: 241-AW-106 Classification: Accepted

Site Names: 241-AW-106, 241-AW-TK-106 ReClassification:

Site Type: Double-Shell Tank Start Date: 1980

Site Status: Active End Date:

Site The unit is comprised of a heat-treated, stress-relieved primary steel liner and a nonstress-relieved

Description: outer steel liner, both inside the reinforced concrete shell. The top of the dome is below grade for

shielding.

Waste Type: Storage Tank

Waste Tank 241-AW-106 began service by receiving complexant concentrate waste in July 1980. The

Description: tank received complexed waste during August and September 1980. From October 1980 to

February 1983, the tank received concentrated customer waste. The tank received double-shell slurry feed waste from March 1983 until May 1990. During July 1986, the tank received non-complexed waste. Since June 1990, the tank has contained dilute non-complexed waste.

Currently, the tank is an active slurry receiver tank for the 242-A Evaporator.

Site Code: 241-AX-A Classification: Accepted

Site Names: 241-AX-A, 241-AX-A Diversion Box, 241- ReClassification:

AX-A Structural Valve Pit, 241-AX-A

Valve Pit

Site Type: Valve Pit Start Date: 1965

Site Status: Active End Date:

Site The unit is an underground reinforced concrete structure with 1 foot (0.31 meter) thick walls and

Description: floor.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operation.

Site Code: 241-AX-B Classification: Accepted

Site Names: 241-AX-B, 241-AX-B Diversion Box, 241- ReClassification:

AX-B Structural Valve Pit, 241-AX-B

Valve Pit

Site Type: Valve Pit Start Date: 1965

Site Status: Active End Date:

Site The unit is an underground reinforced concrete structure with 1 foot (.31 meters) thick walls and

Description: floor.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operation.

Site Code: 241-AX-IX Classification: Accepted

Site Names: 241-AX-IX, 241-AX Ion Exchanger **ReClassification:**

Site Type:Storage TankStart Date:Site Status:InactiveEnd Date:

Site The ion exchange column is an above ground cylinder.

Description:

Site Code: 241-AX-101 Classification: Accepted

Site Names: 241-AX-101, 241-AX-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1965Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. This is a third-

Description: generation tank having a flat bottom, and an additional grid of drain slots beneath the steel liner

bottom. The dome is below grade for shielding.

Waste Type: Storage Tank

Waste Double shell slurry feed is waste concentrated just before reacting the sodium aluminate saturation boundary in the evaporator without exceeding the receiver tank composition limit.

Site Code: 241-AX-102 Classification: Accepted

Site Names: 241-AX-102, 241-AX-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1966Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is below grade for shielding. This is a third-generation tank having a flat bottom, and an additional

grid of drain slots beneath the steel liner bottom.

Waste Type: Storage Tank

Waste This tank received concentrated complexant which is a concentrate product from the evaporation

Description: of dilute complexed waste.

Site Code: 241-AX-103 Classification: Accepted

Site Names: 241-AX-103, 241-AX-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1965Site Status:InactiveEnd Date:1980

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. This is a third-generation tank having a flat bottom, and an additional grid of drain slots beneath the steel liner

bottom. The dome is below grade for shielding.

Waste Type: Storage Tank

Waste This tank received concentrated complexant which is concentrated product form the evaporation

Description: of dilute complexed waste.

Site Code: 241-AX-104 Classification: Accepted

Site Names: 241-AX-104, 241-AX-TK-104 ReClassification:

Site Type: Single-Shell Tank Start Date: 1966

Site Status: Inactive End Date: 1976

Site The unit is carbon-steel lined, with a reinforced concrete shell, dome, and base. The dome is

Description: below grade for shielding. This is a third-generation tank having a flat bottom, and an additional

grid of drain slots beneath the steel liner bottom.

Waste Type: Storage Tank

Waste This tank received non-complexed waste which is a general waste term applied to all Hanford

Description: Site non-complexed liquors non-identified as complexed.

Site Code: 241-AX-151 Classification: Accepted

Site Names: 241-AX-151, 241-AX-151 Diversion Box, ReClassification:

241-AX-151 Diverter Station, IMUST, Inactive Miscellaneous Underground

Storage Tank

Site Type:Diversion BoxStart Date:1962Site Status:InactiveEnd Date:1985

Site The unit is an underground reinforced concrete structure. There are four diverter tanks (tanks 241-

Description: AX-151-D, E, F and G; see "Subsite" sections) in individual cells and a catch tank (241-A-

151CT) in a pump pit. Each cell has a stainless steel liner on the floor that extends approximately one foot (.31 meters) up the wall. The cells and pump pit drain into the catch tank below. The

structure is surrounded with posts and chain. It is has radiological and IMUST signs.

Waste Type: Process Effluent

Waste The unit received wastes from 202-A PUREX Plant. Waste transferred also includes PUREX

Description: acid waste and B Plant neutralized high-level waste.

Waste Type: Equipment

Waste It is estimated that approximately 50 pounds (23 kilograms) of lead is stored in each diversion

Description: box.

SubSites:

SubSite Code: 241-AX-151:1

SubSite Name: 241-AX-151:1, 241-AX-151CT, 241-AX-151 Catch Tank, IMUST, Inactive Miscellaneous

Underground Storage Tank

Classification: Accepted

ReClassification:

Description: The catch tank is a 41,640 liter (11,000 gallon) stainless steel lined catch tank located below

the four diverter tanks inside the 241-AX-151 Diverter Station. The catch tank recieved drainage from the diverter tanks, cells and pump pit. The contents of the catch tank could be jetted to diverter tank E or F. The catch tank contains 11,150 liters (2946 gallons) of surpenate waste that is anticipated to consist of waste similar to that contained in AX tank

farm.

SubSite Code: 241-AX-151:2

SubSite Name: 241-AX-151:2, 241-AX-151-TK-D, 241-AX-151 Diverter Tank D

Classification: Accepted

ReClassification:

Description: Tank D is a 76.2 centimeter (30 inch) diameter stainless steel tank that is 132 centimeters (52

inches) high. It is located within a concrete cell with a stainless steel liner on the cell floor, in the 241-AX-151 Diverter Station. The cell is equipped with a diverter mechanism. The tank has a 602 liter (159 gallon) capacity. The tank was used in conjunction with the other three diverter tanks to provide waste routing from PUREX to the A, AX and AY Tank Farms and

the 244-AR Vault.

SubSite Code: 241-AX-151:3

SubSite Name: 241-AX-151:3, 241-AX-151-TK-E, 241-AX-151 Diverter Tank E

Classification: Accepted

ReClassification:

Description: Tank E is a 76.2 centimeter (30 inch) diameter stainless steel tank that is 132 centimeters (52

inches) high. It is located within a concrete cell with a stainless steel liner on the cell floor, in the 241-AX-151 Diverter Station. The cell is equipped with a diverter mechanism. The tank has a 602 liter (159 gallon) capacity. The tank was used in conjunction with the other three diverter tanks to provide waste routing from PUREX to the A, AX and AY Tank Farms and

the 244-AR Vault.

SubSite Code: 241-AX-151:4

SubSite Name: 241-AX-151:4, 241-AX-151-TK-F, Diverter Tank F

Classification: Accepted

ReClassification:

Description: Tank F is a 76.2 centimeter (30 inch) diameter stainless steel tank that is 132 centimeters (52

inches) high. It is located within a concrete cell with a stainless steel liner on the cell floor, in the 241-AX-151 Diverter Station. The cell is equipped with a diverter mechanism. The tank has a 602 liter (159 gallon) capacity. The tank was used in conjunction with the other three diverter tanks to provide waste routing from PUREX to the A, AX and AY Tank Farms and

the 244-AR Vault.

SubSite Code: 241-AX-151:5

SubSite Name: 241-AX-151:5, 241-AX-151-TK-G, Diverter Tank G

Classification: Accepted

ReClassification:

Description: Tank G is a 76.2 centimeter (30 inch) diameter stainless steel tank that is 132 centimeters (52

inches) high. It is located within a concrete cell with a stainless steel liner on the cell floor, in the 241-AX-151 Diverter Station. The cell is equipped with a diverter mechanism. The tank has a 602 liter (159 gallon) capacity. The tank was used in conjunction with the other three diverter tanks to provide waste routing from PUREX to the A, AX and AY Tank Farms and

the 244-AR Vault.

Site Code: 241-AX-152CT Classification: Accepted

Site Names: 241-AX-152CT, 241-AX-152-CT Catch ReClassification:

Tank

Site Type: Catch Tank Start Date: 1965

Site Status: Inactive End Date:

Site The site is an underground tank.

Description:

Waste Type: Process Effluent

Waste This unit transfers mixed waste solutions from processing and decontamination operations.

Description: Volumes are variable according to specific plant operation. Lead shielding may also be

contained inside the diversion box.

Site Code: 241-AX-152DS Classification: Accepted

Site Names: 241-AX-152DS, 241-AX-152 Diverter ReClassification:

Station, 241-AX-152-DS Diverter Station

Site Type: Diversion Box Start Date: 1965

Site Status: Inactive End Date: 2002

Site The unit is a reinforced concrete structure with the top at ground level. There are two diverter

Description: tanks in a common cell with a stainless steel liner on the floor that extends approximately 1 foot

(0.31 meters) up the cell wall. There is also a pump pit that does not have a stainless steel liner.

The cell and pump pit drain to a catch tank below.

Waste Type: Equipment

Waste This unit transports waste solutions from processing and decontamination operations. Volumes

Description: are variable according to specific plant operation.

Waste Type: Chemicals

Waste This unit transports waste solutions from processing and decontamination operations. Volumes

Description: are variable according to specific plant operation.

Site Code: 241-AX-155 Classification: Accepted

Site Names: 241-AX-155, 241-AX-155 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1983

Site Status: Active End Date:

Site

Description:

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operation. Lead shielding may also be contained inside

the diversion box.

Waste Type: Equipment

Waste It is estimated that approximately 50 pounds (23 kilograms) of waste lead is stored in each

Description: diversion box.

Site Code: 241-AX-501 Classification: Accepted

Site Names: 241-AX-501, 241-AX-501 Valve Pit, 241- ReClassification:

AX-501 Condensate Valve Pit

Site Type:Valve PitStart Date:Site Status:InactiveEnd Date:

Site The unit is a reinforced concrete structure that contains a valve that routes the tank farm

Description: condensate to the 241-A-417 Pump Pit.

Waste Type: Storage Tank

Waste The unit receives and routes tank farm condensate.

Description:

Site Code: 241-AY-101 Classification: Accepted

Site Names: 241-AY-101, 241-AY-TK-101 ReClassification:

Site Type: Double-Shell Tank Start Date: 1971

Site Status: Active End Date:

Site The unit is composed of a heat-treated, stress-relieved primary steel liner and a nonstressed-

Description: relieved secondary steel liner, both inside a reinforced concrete shell. The dome is located below

grade for shielding purposes.

Waste Type: Storage Tank

Waste Dilute complexed waste is characterized by a high content of organic carbon including organic

Description: complexants, including: ethylenediaminetetra-acetic acid, citric acid, and hydroxyethyl-

ethylenediaminetriacetic acid, being the major complexants used. Main sources of dilute

complexed waste in the double shell tank system are saltwell liquid inventory.

Site Code: 241-AY-102 Classification: Accepted

Site Names: 241-AY-102, 241-AY-TK-102 ReClassification:

Site Type: Double-Shell Tank Start Date: 1972

Site Status: Active End Date:

Site The unit is composed of a heat-treated, stress-relieved primary steel liner and a nonstressed-

Description: relieved secondary steel liner, both inside a reinforced concrete shell. The dome is located below

grade for shielding purposes.

Waste Type: Storage Tank

Waste The unit has received neutralized high-level waste and double-shell slurry feed and is currently a

Description: dilute noncomplexed waste receiver tank. Prior to evaporator processing, samples are taken and

analyzed for parameters such as visual appearance; percent solids; exotherms or endotherms; total organic carbon; gamma energy spectrum; weight percent water; pH; specific gravity;

viscosity; and for the specific ions Al, OH, Cl, CO3, F, Na, NO2, NO3, Pm, PO4, Pu, SO4, Sr, Am, and Np. The unit received supernatant consisting of double-shell slurry feed and noncomplexed waste from A and BX tank farms.

Site Code: 241-AY-151 Classification: Accepted

Site Names: 241-AY-151, 241-AY-151 Diversion Box, ReClassification:

241-AY-151 Pump Out Pit

Site Type: Diversion Box Start Date: 1975

Site Status: Inactive End Date:

Site This unit is an underground, reinforced concrete structure. It contains four PUREX style nozzles.

Description:

Waste Type: Process Effluent

Waste The diversion box transferred liquid process waste between the processing plants and the tank

Description: farms. Lead shielding may also be contained inside the diversion box.

Waste Type: Chemicals

Waste The diversion box contains PUREX organic wash, aging PUREX, PUREX acid, and B Plant

Description: high level wastes.

Site Code: 241-AY-152 Classification: Accepted

Site Names: 241-AY-152, 241-AY-152 Diverter ReClassification:

Station, 241-AY-152 Sluice Transfer Box

Site Type:Diversion BoxStart Date:1971Site Status:InactiveEnd Date:1985

Site The unit is an underground, reinforced concrete structure.

Description:

Waste Type: Process Effluent

Waste This diversion box received PUREX organic wash, PUREX acid, PUREX high level waste and **Description:** B Plant high level waste. Lead shielding may also be contained inside the diversion box.

Waste Type: Equipment

Waste This diversion box contains lead shielding.

Description:

Site Code: 241-AZ-101 Classification: Accepted

Site Names: 241-AZ-101, 241-AZ-TK-101 ReClassification:

Site Type: Double-Shell Tank Start Date: 1976

Site Status: Active End Date:

Site The unit is composed of a heat-treated, stress-relieved primary steel liner and a non-stressed-relieved secondary steel liner, both inside a reinforced concrete shell. The dome is below grade

for shielding purposes.

Waste Type: Storage Tank

Waste Description:

Tank 241-AZ-101 began service by receiving evaporator waste in 1976. The tank continued to receive evaporator waste until 1977. From 1978 until September 1980, the tank received complexed waste, double-shell slurry feed waste, non-complexed waste, water, evaporator waste, residual liquor, and complexant concentrate waste. The tank received non-complexed waste from October 1980 until January 1984. From 1981 until 1986, the tank received waste from PUREX. The tank has contained aging waste from February 1984 until the present. The tank is currently an inactive, concentrated waste holding tank that receives only condensate from

other aging waste tanks.

Site Code: 241-AZ-102 Classification: Accepted

Site Names: 241-AZ-102, 241-AZ-TK-102 ReClassification:

Site Type: Double-Shell Tank Start Date: 1976

Site Status: Active End Date:

Site The unit is composed of a heat-treated, stress-relieved primary steel liner and a nonstressed-

Description: relieved secondary steel liner, both inside a reinforced concrete shell. The dome is below grade

for shielding purposes.

Waste Type: Storage Tank

Waste Description:

The tank is currently an inactive, dilute receiver tank that receives only condensate from other aging waste tanks. From April 1986 until the present, the tank has contained aging wasted. The tank received waste from PUREX from 1986 until 1990. From February 1984 until February 1986, the tank received non-complexed waste. The tank received complexant concentrate waste from 1978 until November 1983. During December 1983 and January 1984, the tank received complexed waste. During 1977, the tank received residual liquor waste. Tank 241-AZ-102 began service by receiving water in 1976 and was labeled as a spare. The tank received evaporator waste from 1976 until 1977.

Site Code: 241-AZ-151CT Classification: Accepted

Site Names: 241-AZ-151CT, 241-AZ-151 Catch Tank ReClassification:

Site Type: Catch Tank Start Date: 1977

Site Status: Active End Date:

Site This site is to be consolidated into the 241-AZ-151DS site.

Description:

Waste Type: Process Effluent

Waste This unit was used for transfer of mixed waste solutions from processing and decontamination **Description:** operations. In 1994, it contained 15846 liters (4,170 gallons) of waste. In 2000, it contained

operations. In 1994, it contained 15846 liters (4,170 gallons) of waste. In 2000, it contained 8037 liters (2115 gallons). The Tank Waste Summary documents indicate the diverter station and catch basin are active and the liquid volume changes daily. The liquid is pumped to the 241-

AZ-102 tank as needed. Lead shielding may also be contained inside the diversion box.

Site Code: 241-AZ-151DS Classification: Accepted

241-AZ-151DS, 241-AZ-151-DS Diverter **Site Names: ReClassification:**

Station, 241-AZ-151 Diverter Station

Site Type: Diversion Box Start Date: 1976

Site Status: End Date: Active

Site The diverter station is an underground reinforced concrete structure.

Description:

Process Effluent Waste Type:

Waste

This unit was used to transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operation. The types of waste **Description:**

> received by this unit include: aging waste, concentrated complexant, double-shell slurry feed, and non-complexed waste. In 1994, it contained 15846 liters (4,170 gallons) of waste. In 2000, it contained 8037 liters (2115 gallons). The Tank Waste Summary documents indicate the

diverter station and catch basin are active and the liquid volume changes daily.

Site Code: 241-AZ-152 **Classification:** Accepted

241-AZ-152, 241-AZ-152 Diversion Box, **ReClassification: Site Names:**

241-AZ-152 Sluice Transfer Box

Site Type: Diversion Box **Start Date:** 1977

End Date: Site Status: Active

241-AZ-152 is a reinforced concrete diversion box. All nozzles are 4 inch (10 centimeter) Site

Description: PUREX style.

Process Effluent **Waste Type:**

241-AX-152 contains high-level B Plant waste, aging waste, B Plant cesium feed waste, non-Waste complexed waste, concentrated complex waste, cesium/strontium recovery waste, evaporator **Description:**

waste, double-shell tank slurry, low-level waste from B Plant, condensate (aging waste), residual liquor, and PUREX low-level waste. Lead shielding may also be contained inside the diversion

box.

Site Code: 216-C-8 **Classification:** Accepted

216-C-8, 271-CR Crib, 216-C-8 Crib, 216-**ReClassification: Site Names:**

C-8 French Drain

French Drain 1962 **Site Type: Start Date:** 1965 **Site Status:** Inactive **End Date:**

In June 2001, the crib location was no longer marked or posted. The area was recently covered Site

Description: with gravel during road construction in the vicinity of 7th Street and Buffalo Ave.

Waste Type: Process Effluent

The site received the ion exchange waste from the 271-CR Building. The waste volume is Waste

unknown. The site contains less than 10 curies total beta. **Description:**

241-C-101 **Site Code: Classification:** Accepted Site Names: 241-C-101, 241-C-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1970

Site Description:

The tank is an underground, steel tank with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. The footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished-shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A steel liner lines the bottom and sidewall of the

tank.

Waste Type: Storage Tank

Waste Description:

This tank contains bismuth phosphate metal waste, tributyl phosphate waste, and PUREX coating waste. Document WHC-SD-WM-ER-349 references the most complete estimated inventory for this tank. Because this tank was the first tank in a cascading series, most of the

solids precipitated out of the solutions into this tank.

Site Code: 241-C-102 Classification: Accepted

Site Names: 241-C-102, 241-C-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1976

Site Description:

The tank is an underground steel tank with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. The footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished-shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A steel liner lines the bottom and sidewall of the tank.

Waste Type: Storage Tank

Waste Description:

This tank received bismuth phosphate metal waste, tributyl phosphate waste, PUREX coating waste, high-level waste, PUREX organic wash waste, supernatant containing organic wash

wastes and coating wastes from the 241-A, -AX, and -C Tanks.

Site Code: 241-C-103 Classification: Accepted

Site Names: 241-C-103, 241-C-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1979

Site Description:

The tank is an underground steel tank with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. The footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished-shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A steel liner lines the bottom and sidewall of the tank.

Waste Type: Storage Tank

Waste This tank has waste from the following process: PUREX coating waste, tributyl phosphate waste, coating waste, PUREX high-level waste, B Plant high-level waste, B Plant waste

fractionization low-level waste, PUREX sludge supernatant, PUREX low-level waste, waste fractionization PUREX sludge, PUREX organic wash waste, laboratory waste, decontamination waste, REDOX ion exchange waste, REDOX high-level waste, noncomplexed waste, waste fractionization ion exchange waste, N Reactor waste, PNL waste, and evaporator bottoms from 241-A -B, -BX, and -C tank farms. This unit was used as the receiver for operating P-10 saltwell systems within the 241-C Tank Farm. An additional source of waste is PUREX and insoluble strontium-rich sluicing solids from the operation of 244-CR Vault.

Site Code: 241-C-104 Classification: Accepted

Site Names: 241-C-104, 241-C-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1980

Site The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a

reinforced-concrete cylindrical footing. The footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished-shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A steel liner lines the bottom and sidewall of the

tank.

Waste Type: Storage Tank

Description:

Waste Waste is comprised of unknown waste, sludge, and pumpable liquid. This tank received bismuth **Description:** phosphate metal waste starting in 1946, strontium-leached sluicing solids in 1977, and fissile

material (including uranium-223) from PUREX thorium campaigns.

Site Code: 241-C-105 Classification: Accepted

Site Names: 241-C-105, 241-C-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1979

Site The underground tank is constructed with a cylindrical reinforced-concrete

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. The footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished-shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A steel liner lines the bottom and sidewall of the

tank.

Waste Type: Storage Tank

Waste This tank was used as a receiver tank for PUREX sludge supernate enroute to B Plant. It received bismuth phosphate metal waste from 1947 to 1953. The tank contains unknown waste,

sludge, and pumpable liquid.

Site Code: 241-C-106 Classification: Accepted

Site Names: 241-C-106, 241-C-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1979

Site Description:

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Description:

This tank received bismuth phosphate metal waste, and PUREX process fission product waste, which included large amounts of strontium. The tank was sluiced in 1952 -1955 for the uranium recovery project. The waste contains process supernate, unknown waste products, sludge, and pumpable liquid.

Site Code: 241-C-107 Classification: Accepted

Site Names: 241-C-107, 241-C-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1978

Site Description:

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Description:

This tank received Bismuth Phosphate first cycle waste beginning in 1946. The tank received insoluble strontium leached, sluicing solids in 1977. This unit is a low-heat load, passively ventilated tank.

Site Code: 241-C-108 Classification: Accepted

Site Names: 241-C-108, 241-C-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1977

Site Description:

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Tank 241-C-108 received cascade overflow from tank 241-C107 in 1947. This tank was also **Description:** used as a primary settling tank for "In-Farm" scavenging for the Uranium Recovery process.

used as a primary settling tank for "In-Farm" scavenging for the Uranium Recovery process.

This tank is on the ferrocyanide watch list. Waste is composed entirely of sludge, with no

pumpable liquid.

Site Code: 241-C-109 **Classification:** Accepted

241-C-109, 241-C-TK-109 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1948 **Site Status:** Inactive **End Date:** 1978

Site The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a **Description:**

reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and

a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for

this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Tank 241-C-109 was receiving cascade overflow (B Plant first-cycle waste and decontamination Waste waste) from tank 241-C-108 in 1948. This tank was also used as a primary settling tank for "in **Description:**

farm" scavenging for the Uranium Recovery process. This tank is on the ferrocyanide watch list. In 1994 the tank was described as containing unknown waste and sludge, with no saltcake or

pumpable liquid remaining.

Site Code: 241-C-110 **Classification:** Accepted

241-C-110, 241-C-TK-110 **Site Names: ReClassification:**

Single-Shell Tank **Start Date:** 1946 **Site Type:** 1976 **Site Status:** Inactive **End Date:**

Site **Description:** The underground tank was constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Tank 241-C-110 is the first tank in the 241-C-110, 241-C-111, and 241-C-112 cascade line. **Description:**

This tank received bismuth phosphate first cycle waste and process decontamination waste from

B Plant. Additionally, this tank was used as a primary settling tank for "In-Farm" scavenging for

the Uranium Recovery process.

Site Code: 241-C-111 **Classification:** Accepted

241-C-111, 241-C-TK-111 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1946 **Site Status:** Inactive **End Date:** 1978

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a Site reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete **Description:**

basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and

a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Description:

Tank 241-C-111 is the second tank in the 241-C-110, -111, and -112 cascade line. This tank received bismuth phosphate first cycle waste and B Plant decontamination waste. Additionally, this tank was used as a primary settling tank for "In-Farm Scavenged Uranium". There is no

pumpable liquid remaining in the tank.

Site Code: 241-C-112 Classification: Accepted

Site Names: 241-C-112, 241-C-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1976

Site Description:

The underground tank is constructed with a cylindrical reinforced-concrete wall that rests on a reinforced-concrete cylindrical footing. This footing gradually tapers to a reinforced-concrete basemat foundation. The basemat foundation is dished shaped and lined with a layer of grout and a layer of asphaltic waterproofing membrane. A partial spherical shell dome rests on the cylindrical wall. A steel liner lines the bottom and sidewall of the tank. The operating depth for this tank is 5.2 meters (17 feet).

Waste Type: Storage Tank

Waste Description:

Tank 241-C-112 is the third tank in the 241-C-110, 241-C-111, and 241-C-112 cascade lie. This tank received bismuth phosphate first cycle waste and process decontamination waste from B Plant. Additionally, this tank was used as a primary settling tank for "In-Farm" scavenging for

the Uranium Recovery process.

Site Code: 241-C-151 Classification: Accepted

Site Names: 241-C-151, 241-C-151 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete coverblocks with lifting bails.

Waste Type: Process Effluent

Waste This unit was used to transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Radiological contamination is estimated to be high in alpha, beta, and gamma.

Waste Type: Chemicals

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Description: Volumes were variable according to specific plant operations. Chemical residues may be

present. Radiological contamination is estimated to be high in alpha, beta, and gamma.

Site Code: 241-C-152 Classification: Accepted

Site Names: 241-C-152, 241-C-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site This diversion box is a reinforced concrete structure.

Description:

Waste Type: Process Effluent

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Volumes were variable according to specific plant operations. Radiological contamination is

estimated to be extremely high.

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Site Code: 241-C-153 Classification: Accepted

Site Names: 241-C-153, 241-C-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete cover blocks and lifting bails.

Waste Type: Process Effluent

Waste The diversion box transferred liquid waste from the processing plants to the tank farms. The **Description:** Part A Permit assumed that 50 pounds (23 kilograms) of lead shielding bricks may also be stored

in this diversion box.

Waste Type: Chemicals

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Volumes were variable according to specific plant operation. Diversion box contamination is

estimated to be high in alpha, beta, and gamma. Chemical residues may be present.

Site Code: 241-C-201 Classification: Accepted

Site Names: 241-C-201, 241-C-TK-201 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1977

Site The underground tank is a vertically configured, reinforced-concrete cylinder, with a slab roof. It

Description: is lined with steel. The tank rests on a footing which is integral to the tank base.

Waste Type: Storage Tank

Waste Tank 241-C-201 began to operate in 1947 by receiving bismuth phosphate metal waste. This tank was sluiced during the uranium recovery process. No pumpable liquid remains in the tank.

Site Code: 241-C-202 Classification: Accepted

Site Names: 241-C-202, 241-C-TK-202 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1977

Site The underground tank is a vertically configured, reinforced-concrete cylinder, with a slab roof. It

Description: is lined with steel. The tank rests on a footing which is integral to the tank base.

Waste Type: Storage Tank

Waste Tank 241-C-202 began to operate in 1947 by receiving metal waste. Tanks 241-C-201, -202, - **Description:** 203, and -204 were used to settle waste while supernatant was sent to a crib. This tank was

sluiced for uranium recovery. No pumpable liquid remains in the tank.

Site Code: 241-C-203 Classification: Accepted

Site Names: 241-C-203, 241-C-TK-203 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1976

Site The site is a vertically configured, underground reinforced-concrete tank, with a slab roof. It is

Description: lined with steel. The tank rests on a footing which is integral to the tank base.

Waste Type: Storage Tank

Waste Tank 241-C-203 began to operate in 1947 by receiving metal waste. No pumpable liquid remains in the tank. In 1986, a cracked sludge surface was observed with no visible liquids.

Site Code: 241-C-204 Classification: Accepted

Site Names: 241-C-204, 241-C-TK-204 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1977

Site The tank is a vertically configured, reinforced-concrete cylinder, with a slab roof. The tank is

Description: lined with steel. The tank rests on a footing which is integral to the tank base.

Waste Type: Storage Tank

Waste Tank 241-C-204 began to operate in 1948 by receiving metal waste. Tanks 241-C-201, -202, - **Description:** 203, and -204 were used to settle waste while supernatant was sent to a crib. This tank was

sluiced for uranium recovery. No pumpable liquid remains in the tank.

Site Code: 241-C-252 Classification: Accepted

Site Names: 241-C-252, 241-C-252 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete cover blocks and lifting bails.

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Waste Type: Process Effluent

Waste This unit was used to transfer waste solutions from processing and decontamination operations.

Volumes were variable according to specific plant operations. Radiological contamination is

expected to be high in alpha, beta, and gamma. It is estimated that approximately 23 kilograms

(50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-C-301 Classification: Accepted

Site Names: 241-C-301, 241-C-301-C Catch Tank, 241- ReClassification:

C-301C, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Catch TankStart Date:1946Site Status:InactiveEnd Date:1985

Site The 241-C-301 Catch tank is an underground tank. It is surrounded with post and chain and

Description: marked with Inactive Miscellaneous Underground Storage Tank (IMUST) signs.

Waste Type: Storage Tank

Waste The 241-C-151, 241-C-152, 241-C-153 and 241-C-252 diversion boxes drained waste solutions **Description:** from leaks or spills that occurred during waste transfer operations. The wastes received in the

catch tank include waste from B Plant, PUREX and Hot Semiworks operations. In 1994, the tank contained 5586 liters (1470 gallons) of liquid supernate and 34,260 liters (9016 gallons) of

sludge. The tank may also have received ferrocyanide waste.

Site Code: 241-C-801 Classification: Accepted

Site Names: 241-C-801, 241-C-801 Cesium Loadout ReClassification:

Facility

Site Type:Process Unit/PlantStart Date:1962Site Status:InactiveEnd Date:1976

Site The site is a single story building located inside the 241-C Tank Farm. The upper portion of the

Description: building is constructed of prefabricated metal. The bottom 2.9 meters (9.5 feet) of the building is constructed of concrete walls and foundations, approximately 0.3 meters (1 foot) thick. This part

of the structure is covered with earth. The main building sections include the loadout room, which is 9.8 by 4.3 by 6.1 meters (32 by 14 by 20 feet). The operating room, which is 4.3 by 3.7

by 6.1 meters (14 by 12 by 20 feet). A valve pit, measuring 2.4 by 2.1 by 2.4 meters (8 by 7 by 8 feet) is located in the southwest portion of the building. A rollup door that allowed truck access to the High Bay portion of the building. The High Bay occupies approximately half of the building and has a 5 ton capacity crane bridge. There are two dry wells associated with this building. One drywell is located inside the tank farm fence, near the north wall of 801-C. The other dry well is located approximately 23 meters (75 feet) north of the 801-C building, outside the tank farm fence.

Waste Type: Process Effluent

Waste Description:

The unit is a radioactively contaminated structure. Contamination levels are estimated at 30 curies beta. There may be residual chemicals and radioactive material in processing equipment and piping. There are no storage tanks inside this building. The drywell located north of the building, outside the fence, is posted with Contamination Area signs.

Site Code: 241-CR-151 Classification: Accepted

Site Names: 241-CR-151, 241-CR-151 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1946

Site Status: Inactive End Date:

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete cover blocks and lifting bails.

Waste Type: Equipment

Waste It was estimated that approximately 50 pounds (23 kilograms) of waste lead was stored in this

Description: unit.

Waste Type: Chemicals

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation.

Site Code: 241-CR-152 Classification: Accepted

Site Names: 241-CR-152, 241-CR-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete cover blocks and lifting bails.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation.

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Site Code: 241-CR-153 Classification: Accepted

Site Names: 241-CR-153, 241-CR-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1985

Site The diversion box is an underground, reinforced concrete structure. Surface features include

Description: concrete cover blocks and lifting bails.

Waste Type: Chemicals

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation.

Waste Type: Equipment

Waste It was estimated that approximately 50 pounds (23 kilograms) of waste lead was stored in this

Description: unit.

Site Code: 244-CR VAULT Classification: Accepted

Site Names: 244-CR VAULT, 244-CR Vault ReClassification:

Site Type: Receiving Vault Start Date: 1946
Site Status: Active End Date: 1988

Site This vault is an underground, reinforced concrete structure. It is a two-level, multi-cell structure. **Description:** The lower cell contains the process vessels. Upper cells contain piping and equipment. The

structure is constructed with concrete cover blocks which, when removed, allow access to the

upper cells. The cells contain four process vessels: TK-CR-001, TK-CR-011, TK-CR-002, and

TK-CR-003.

Waste Type: Storage Tank

Waste The unit contained the following wastes: metal waste, first cycle waste, B Plant decontamination

Description: waste, PUREX fission product waste, uranium recovery sluicing waste, coating waste,

radioactive condensates, sink wastes, REDOX spent solvent waste, other REDOX waste, PUREX organic wash waste, PUREX acid process waste, PUREX spent solvent waste,

strontium recovery waste, and critical mass laboratory waste.

SubSites:

SubSite Code: 244-CR VAULT:1

SubSite Name: 244-CR VAULT:1, 244-CR-TK-001, 244-CR-001 Tank and Sump

Classification: Accepted

ReClassification:

Description: 244-CR-001 is a 189,250 liter (50,000 gallon) tank located in a 6.7 meter (22 foot) by 7.9

meter (26 foot) by 8.8 meter (29 foot) cell within the 244-CR Vault. The concrete cell has a 170 liter (45 gallon) capacity sump.

The 244-CR Vault and associated tanks and cells were used as the uranium sludge recovery and distribution vault for the 241-C Tank Farm. CR Vault was also used for the interim storage and transfer of waste from B-Plant, PUREX and Hot Semi-Works. Tank 244-CR-001 was the slurry accumulator, receiving waste from the C Farm tanks. The slurry was processed with nitric acid. Currently the tank is estimated to contain 7,570 liters (2,000 gallons) of waste solids from the Uranium Recovery Program.

244-CR VAULT:2 **SubSite Code:**

SubSite Name: 244-CR VAULT:2, 244-CR-TK-002, 244-CR-002 Tank and Sump

Classification: Accepted

ReClassification:

244-CR-001 is a 56,775 liter (15,000 gallon) tank located in a 4.9 meter (16 foot) by 6.0 **Description:**

meter (20 foot) by 5.79 meter (19 foot) cell within the 244-CR Vault. The concrete cell has a

170 liter (45 gallon) capacity sump.

The 244-CR Vault and associated tanks and cells were used as the uranium sludge recovery and distribution vault for the 241-C Tank Farm. CR Vault was also used for the interim storage and transfer of waste from B-Plant, PUREX and Hot Semi-Works. Tank 244-CR-002 was the blending tank, mixing waste from the 244-CR-001 with nitric acid. Currently the tank is estimated to contain 5,678 liters (1,500 gallons) of waste solids from the Uranium Recovery Program.

SubSite Code: 244-CR VAULT:3

SubSite Name: 244-CR VAULT:3, 244-CR-TK-003,

Classification: Accepted

ReClassification:

Description: 244-CR-003 is a 56,775 liter (15,000 gallon) tank located in a 4.9 meter (16 foot) by 6.0

meter (20 foot) by 5.79 meter (19 foot) cell within the 244-CR Vault. The concrete cell has a

170 liter (45 gallon) capacity sump.

The 244-CR Vault and associated tanks and cells were used as the uranium sludge recovery and distribution vault for the 241-C Tank Farm. CR Vault was also used for the interim storage and transfer of waste from B-Plant, PUREX and Hot Semi-Works. Tank 244-CR-003 was a blending tank, mixing waste from the 244-CR-001 with nitric acid. Currently the tank is estimated to contain 15,973 liters (4,200 gallons) of saltwell waste with an unknown amount of solids. 244-CR-003 is the only active tank in the CR Vault. The tank is available

to be used for saltwell pumping of the C Tank Farm.

SubSite Code: 244-CR VAULT:4

SubSite Name: 244-CR VAULT:4, 244-CR-TK-011, 244-CR

Classification: Accepted

ReClassification:

244-CR-011 is a 189,250 liter (50,000 gallon) tank located in a 6.7 meter (22 foot) by 7.9 **Description:**

meter (26 foot) by 8.8 meter (29 foot) cell within the 244-CR Vault. The concrete cell has a

170 liter (45 gallon) capacity sump.

The 244-CR Vault and associated tanks and cells were used as the uranium sludge recovery and distribution vault for the 241-C Tank Farm. CR Vault was also used for the interim storage and transfer of waste from B-Plant, PUREX and Hot Semi-Works. Initially, tank 244-CR-011 acted as a process pump tank for the transfer of processed waste from the CR Vault to the diversion station for transfer to the Uranium Recovery facility or other operations. Currently the tank is estimated to contain132,475 liters (35,000 gallons) of supernate and rainwater.

Site Code: 244-CR-WS-1 Classification: Accepted

Site Names: 244-CR-WS-1, 244-CR French Drain **ReClassification:**

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The unit is a french drain, It is covered and partially filled with gravel.

Description:

Waste Type: Water

Waste This unit received condensate from the 291-CR Stack, the plenum chamber exhaust fans and the

Description: plenum inlet.

Site Code: 200-E-27 Classification: Accepted

Site Names: 200-E-27, 242AC Pipefitter Shop Lead **ReClassification:**

Cutting Area, 242-AC

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The 242AC Pipefitter Shop had a lead cutting area and an area used to store lead sheets and pipe

Description: for use on various construction projects. The area is no longer used for lead cutting, but is used by the shop as an equipment and material storage area. The lead cutting area has sandy soil and contains pieces of lead. The area surrounding the lead cutting area is covered with crushed rock.

Tank farm equipment, lead material covers, and a heavy duty table are currently stored in the lead cutting area. The entire 242AC Pipefitter Shop area is surrounded by a chain-link fence.

Waste Type: Soil

Waste Soil at the site is contaminated with lead.

Description:

Site Code: 200-E-131 Classification: Accepted

Site Names: 200-E-131, Contaminated Soil Associated ReClassification:

with 241-A Tank Farm Complex

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is the soil inside the chain link fence that surrounds the 241-A, AN, AX, AY and AZ

Description: Tank Farms. Various radiological postings and warning signs are attached to the chain link fence. The interior of the tank farm complex is covered with gravel. Many risers and monitoring

devises for the underground structures are visible on the surface. The individual unplanned

releases are not marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension. These areas will also be considered tank farm soil.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-47

Site Names: UPR-200-E-47, UN-200-E-47, Contamination Spread from 241-A Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-48

Site Names: UPR-200-E-48, UN-200-E-48, 241-A-106 Pump Pit Release

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-115

Site Names: UPR-200-E-115, UN-200-E-115, Contamination Spread Inside 241-AX

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-119

Site Names: UPR-200-E-119, UN-200-E-119, Contamination Spread Inside 241-AX

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-125

Site Names: UPR-200-E-125, UN-200-E-125, 241-A-104 Release

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-126

Site Names: UPR-200-E-126, UN-200-E-126, 241-A-105 Tank Leak

Reason: Within Boundary Of Larger Site

Site Code: 200-E-133 Classification: Accepted

Site Names: 200-E-133, Contaminated Soil at C Farm **ReClassification:**

Site Type: Unplanned Release Start Date: 1946

Site Status: Inactive End Date:

Site The site is the soil inside and adjacent to the chain link fence that surrounds the 241-C Tank

Description: Farm. Various radiological postings and warning signs are attached to the chain link fence. The

interior of the tank farm complex is covered with gravel. Many risers and monitoring devises for

the underground structures are visible on the surface. The individual unplanned releases

associated with the 241-C Tank Farms are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas are also part of this site.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne Contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-16

Site Names: UPR-200-E-16, 241-C Overground Transfer Line Leak, UN-200-E-16

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-27

Site Names: UPR-200-E-27, 244-CR Contamination Spread, UN-200-E-27

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-68

Site Names: UPR-200-E-68, Radioactive Contamination Spread, UN-216-E-68, UN-200-E-68

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-81

Site Names: UPR-200-E-81, UN-216-E-9, 241-CR-151 Line Break, UN-200-E-81

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-82

Site Names: UPR-200-E-82, UN-216-E-10, 241-C-152 Line Break, UN-200-E-82, B Plant Ion Exchange

Feed Line Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-107

Site Names: UPR-200-E-107, UN-200-E-107, Contamination Spread in 241-C Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-118

Site Names: UPR-200-E-118, UN-200-E-118, Airborne Release from 241-C-107

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-136

Site Names: UPR-200-E-136, UN-200-E-136, 241-C-101 Tank Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-137

Site Names: UPR-200-E-137, UN-200-E-137, 241-C-203 Leak

Reason: Within Boundary Of Larger Site

Site Code: 200-E-134 Classification: Accepted

Site Names: 200-E-134, Contaminated Soil at 241-AW ReClassification:

Tank Farm

Site Type: Unplanned Release Start Date: 1980

Site Status: Inactive End Date:

Site The site is the soil inside the chain link fence that surrounds the 241-AW Tank Farm. Various **Description:** radiological postings and warning signs are attached to the chain link fence. The interior of the

tank farm complex is covered with gravel. Many risers and monitoring devises for the underground structures are visible on the surface. Occasionally, radioactive contamination is

found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension

around the tank farm perimeter. These areas will also be considered tank farm soil.

Site Code: 2607-E10 Classification: Accepted

Site Names: 2607-E10 ReClassification:

Site Type: Septic Tank Start Date: 1993

Site Status: Active End Date:

Site The 2607-E10 Septic Tank system consists of two tanks and receives sanitary wastewater and

Description: sewage. The drain field associated with this system has a design capacity of 1,298 gallons (4,900

liters) per day.

Waste Type: Sanitary Sewage

Waste The 2607-E10 Septic Tank receives sanitary wastewater and sewage at an estimated rate of 665

Description: gallons (2,500 liters) per day.

Site Code: 2607-ED Classification: Accepted

Site Names: 2607-ED ReClassification:

Site Type: Septic Tank Start Date: 1980

Site Status: Active End Date:

Site The 2607-ED Septic Tank receives sanitary wastewater and sewage from the 2707-AX Building **Description:** and drains to the drain field. The drain field has a capacity of 257 gallons (973 liters) per day.

Waste Type: Sanitary Sewage

Waste The 2607-ED Septic Tank receives sanitary wastewater and sewage from the 2707-AX Building

Description: at an estimated rate of 10 cubic feet (0.28 cubic meters) per day.

Site Code: 2607-EG Classification: Accepted

Site Names: 2607-EG ReClassification:

Site Type: Septic Tank Start Date: 1953

Site Status: Active End Date:

Site The 2607-EG Septic Tank is marked by a large diameter, vertical concrete pipe and receives

Description: sanitary wastewater and sewage from the 271-CR Building. The associated drain field has a

capacity of 619 gallons (2,350 liters) per day.

Waste Type: Sanitary Sewage

Waste The current flow rates to Septic Tank 2607-EG are unknown. However, the 2607-EG septic

Description: system received sanitary sewer effluent from the 271-CR Building at a rate of 6 cubic feet (0.2)

cubic meters) per day in 1987.

Site Code: 2607-EJ Classification: Accepted

Site Names: 2607-EJ, 2607-EJ Septic System ReClassification: Closed Out (5/31/2001)

Site Type: Septic Tank Start Date:
Site Status: Active End Date:

Site The 2607-EJ Septic System was the original system that serviced the 272-AW building. The tank

Description: and drainfield were removed as part of the 50 foot deep excavation for the 241-AP Tank Farm.

The concrete septic tank was divided into two compartment with volumes of 7800 liters (2000 gallons) and a 3900 liters (1000 gallons). It measured 5.9 meters (19.5 feet) long, 2.1 meters (7 feet) wide, and 1.8 meters (6 feet) deep (outer dimensions). The tank had three 0.6 meter (2 foot) access ports which were covered with concrete lids. The tank was connected to a small concrete distribution box which routed the waste from the tank to the sanitary drainfield. The drainfield

consisted of five 15 meter (50 foot) runs of perforated drain tile.

Waste Type: Sanitary Sewage

Waste The 2607-EJ Septic System received sanitary wastewater and sewage.

Description:

Site Code: 241-ER-153 Classification: Accepted

Site Names: 241-ER-153, 241-ER-153 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1945

Site Status: Active End Date:

Site Most of the diversion box structure is underground. The cover blocks with lifting bails are visible

Description: on the surface. The 244-A Lift Station is fenced, marked and radiologically posted.

Waste Type: Process Effluent

Waste The diversion box distributes waste between facilities and tank farms via underground transfer **Description:** lines. Transfer lines V228, SN232 and SN233 are connected to 241-ER-153. Quantities are

on: lines. Transfer lines V228, SN232 and SN233 are connected to 241-ER-153. Quantities are variable according to specific plant operations. This diversion box connects the 241-C Tank Farms to the double-shell tanks, and supports the 241-ER-151 Diversion Box in cross-site waste

transfers. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be

stored in each diversion box.

Site Code: GTF Classification: Accepted

Site Names: GTF, Grout Treatment Facility **ReClassification:**

Site Type:Process Unit/PlantStart Date:1986Site Status:ActiveEnd Date:1991

Site The facility included the Transportable Grout Equipment and an underground feed pipeline from **Description:** the 241-AP-102 tank. The fenced area previously known as the Grout Treatment Facility has

been transitioned to the construction contractor that will build the new Waste Treatment Facility (vitrification plant). The head end of the 216-A-29 ditch was located within this fenced area. The

ditch has been backfilled and stabilized.

Waste Type: Process Effluent

Waste The liquid waste at this facility had low concentrations of radioactive and other hazardous materials. The facility had the capacity to treat 101,000 gallons (382,285 liters) per day.

Site Code: GTFL Classification: Accepted

Site Names: GTFL, Grout Treatment Facility Landfill, ReClassification:

GTF Vaults, PSW Vault, 218-E-16

Site Type:Burial GroundStart Date:1986Site Status:InactiveEnd Date:1991

Site The Grout Treatment Facility Landfill had been located within a fenced area, now designated for

Description: construction of the Waste Treatment Plant (vitrification plant). Access is currently controlled by

the construction contractor. Five underground vaults were constructed of reinforced concrete with cover blocks to support the Grout Treatment facility. The vault floors are sloped toward a leachate collection trench. The site consists of five rectangular vaults known as 101, 102, 103,

104, and 105.

Waste Type: Process Effluent

Waste As of 1992, the Grout Treatment Facility Landfill Vaults had a total capacity of approximately

Description: 185 acre feet (228,200 cubic meters). The waste feed had low concentrations of radionuclides

and hazardous materials.

Site Code: UPR-200-E-16 Classification: Accepted

Site Names: UPR-200-E-16, 241-C Overground ReClassification: Rejected (Consolidation) (6/13/

Transfer Line Leak, UN-200-E-16

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site Neither the spill or the associated pipe, buried at the conclusion of the transfer, are marked or

Description: posted within the Tank Farm.

Waste Type: Process Effluent

Waste The waste was PUREX coating waste that was released to the ground from a line break in the

Description: 241-C-105 to 241-C-108 overground transfer line.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-18 Classification: Accepted

Site Names: UPR-200-E-18, Contamination Release at ReClassification:

the 216-A-8 Sampler Pit, UN-200-E-18

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The sampler pit is a concrete structure with three valves, two vent stacks and one curved bonnet

Description: extending from the structure. The structure is surrounded with post and chain with Underground Radioactive Material and Contamination Area signs. The area around the structure is gravel and

asphalt. The unplanned release is not separately marked or posted.

Waste Type: Process Effluent

Waste Low-level fission products dripped onto the ground from the vent pipe bonnet.

Description:

Site Code: UPR-200-E-27 Classification: Accepted

Site Names: UPR-200-E-27, 244-CR Contamination ReClassification: Rejected (Consolidation) (6/13/

Spread, UN-200-E-27

Site Type:Unplanned ReleaseStart Date:1960Site Status:InactiveEnd Date:1960

Site The release site, within the Tank Farm fenceline, is not specifically marked or posted.

Description:

Waste Type: Process Effluent

Waste Beta/gamma contamination (specks) with readings of 50 to 100 millirads/hour was found near

Description: the vault. Readings of particles on surfaces outside the tank farm fence area were up to 40,000

counts/minute.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-47 Classification: Accepted

Site Names: UPR-200-E-47, UN-200-E-47, ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread from 241-A Tank

Farm

Site Type: Unplanned Release Start Date: 1974

Site Status: Inactive End Date:

Site This tank farm is fenced and radiologically posted. The unplanned release is not separately

Description: marked or posted.

Waste Type: Process Effluent

Waste Beta/gamma contamination assumed to be particulates from the 702-A stack, with readings of

Description: 500 to 20,000 counts per minute, spread across the 241-A Tank Farm.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-48 Classification: Accepted

Site Names: UPR-200-E-48, UN-200-E-48, 241-A-106 ReClassification: Rejected (Consolidation) (6/13/

Pump Pit Release

Site Type: Unplanned Release Start Date: 1974

Site Status: Inactive End Date:

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Wind caused contamination to spread during the installation of a new pump at the 241-A-106 **Description:** tank. Contamination included beta/gamma readings ranging from 700 to 2,000 counts per minute.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-68 Classification: Accepted

Site Names: UPR-200-E-68, Radioactive Contamination ReClassification: Rejected (Consolidation) (6/13/

Spread, UN-216-E-68, UN-200-E-68

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date:

Site The release, inside the Tank Farm fenceline, is not marked or posted.

Description:

Waste Type: Process Effluent

Waste The contamination consisted of beta/gamma particulates, with readings ranging from 2,000

Description: counts per minute to 5 rad per hour on the diversion box cover blocks and other surfaces in 200

East Area.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-70 Classification: Rejected (Proposed)

Site Names: UPR-200-E-70, Radioactive Contamination ReClassification:

from Jumper Removal, UPR-216-E-70, UN-

200-E-70

Site Type:Unplanned ReleaseStart Date:1984Site Status:InactiveEnd Date:1984

Site Although several areas adjacent to the 244-A Lift Station are radiologically posted (and are

Description: contained within WIDS site code 244-A LS), the area contaminated by this event is not marked or

posted since it was decontaminated the next day.

Waste Type: Process Effluent

Waste The contamination consisted of beta/gamma particulates with readings ranging from 1,000 to

Description: 50,000 counts per minute. An isolated area around the lift station had contamination readings of

100,000 counts per minute.

Site Code: UPR-200-E-72 Classification: Accepted

Site Names: UPR-200-E-72, Radioactive Contamination ReClassification:

from Uncovered Buried Waste, UN-200-E-

72

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is no longer marked or posted.

Description:

Waste Type: Misc. Trash and Debris

Waste The contamination consisted of beta/gamma particulates with dose rates up to 7 rad per hour on

Description: the uncovered material and the surrounding area.

Site Code: UPR-200-E-81 Classification: Accepted

Site Names: UPR-200-E-81, UN-216-E-9, 241-CR-151 ReClassification: Rejected (Consolidation) (6/13/

Line Break, UN-200-E-81

Site Type:Unplanned ReleaseStart Date:1969Site Status:InactiveEnd Date:1969

Site The release, inside the tank farm fenceline, is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 136,800 liters (36,000 gallons) of PUREX coating waste was released to the

Description: soil. The release included strontium-90 (360 curies), cesium-137 (720 curies), cerium-144 (360

curies), zirconium-95/niobium (1,080 curies), and ruthenium-103 (1,080 curies) at the time of

release.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-82 Classification: Accepted

Site Names: UPR-200-E-82, UN-216-E-10, 241-C-152 ReClassification: Rejected (Consolidation) (6/13/

Line Break, UN-200-E-82, B Plant Ion

Exchange Feed Line Leak

Site Type:Unplanned ReleaseStart Date:1968Site Status:InactiveEnd Date:1968

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The waste line leak consisted of B Plant Ion Exchange waste containing cesium-134 (100 Description: curies), cesium-137 (11,300 curies), cerium-144 (260 curies), ruthenium-106 (130 curies) and

zirconium-95/nniobium (260 curies) at the time of release.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-86 Classification: Accepted

Site Names: UPR-200-E-86, UN-216-E-14, 241-C Tank ReClassification:

Farm Line Break, Southwest Corner, UN-

200-E-86

Site Type:Unplanned ReleaseStart Date:1971Site Status:InactiveEnd Date:1971

Site The site is an area measuring approximately 6 by 6 meters (20 by 20 feet), with concrete AC-540

Description: marker posts at each corner. The surface has been covered with "Shotcrete". It is posted with

"Underground Radioactive Material" signs.

Waste Type: Process Effluent

Waste A leak of approximately 65802 liters (17,385 gallons) of process waste, containing 25,000 **Description:** curies of cesium-137, caused approximately 36 cubic meters (1,300 cubic feet) of soil to be

curies of cesium-137, caused approximately 36 cubic meters (1,300 cubic feet) of soil to be contaminated. The waste contained approximately 1.35 curies per gallon of cesium-137.

Site Code: UPR-200-E-91 Classification: Accepted

Site Names: UPR-200-E-91, UN-216-E-19, UN-200-E- ReClassification:

91

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This site was a large area of contaminated soil located near the northeast corner of the 241-C

Description: Tank Farm. In 1981, the contaminated soil was removed from this area and taken to another location (UPR-200-E-56). The radiological posting was removed in 1981. This release site is no longer marked or posted. A smaller posted Contamination Area, measuring approximately 10

meters by 10 meters (30 by 30 feet), is located (2001) in the vicinity of where this unplanned release had been and has been given the WIDS site code 200-E-115. Evidence of earlier

revegetation is apparent.

Waste Type: Soil

Waste The release consisted of wind blown radiologically contaminated soil from tank farm activities

Description: and equipment decontamination. The contaminated soil was removed and the area outside the

tank farm fence seeded.

Site Code: UPR-200-E-99 Classification: Accepted

Site Names: UPR-200-E-99, UN-216-E-27, ReClassification:

Contamination Adjacent to 244-CR Vault,

UN-200-E-99

Site Type: Unplanned Release Start Date: 1980
Site Status: Inactive End Date: 1980

Site The previously posted Surface Contamination Area was released from radiation zone status in

Description: March 1981. It is no longer marked or posted. Other areas with radiological postings are

currently visible in this area.

Waste Type: Soil

Waste The release was associated with the migration of contaminated particulates from the 244-CR

Description: Vault onto the surrounding ground surface The 244-CR Vault was used in the transfer of

process waste between facilities.

Site Code: UPR-200-E-100 Classification: Accepted

Site Names: UPR-200-E-100, Radioactive **ReClassification:**

Contamination Near 244-A Lift Station, UN-216-E-100, UN-216-E-29, UN-200-E-

100

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date:

Site This release is not separately marked or posted. Various radiological postings exist in this

Description: vicinity that are associated with the 244-A Lift Station and 241-C Tank Farm contamination

migration.

Routine radiological surveys of the 244-A Lift Station Area have changed the size and the shape of the posted areas as new contamination specks are identified and remediation attempts occur.

Waste Type: Animal Waste

Waste The contamination was due to windblown particulates and biological transport (rodent feces)

Description: from the 200 East Area tank farms and the 244-A Lift Station.

Site Code: UPR-200-E-107 Classification: Accepted

Site Names: UPR-200-E-107, UN-200-E-107, ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread in 241-C Tank Farm

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site The site is not separately marked or posted from the rest of the tank farm postings.

Description:

Waste Type: Process Effluent

Waste The waste was tributyl phosphate from the 221-U uranium recovery process. Contaminated

Description: liquid was discharged to the ground before the pump could be shut off.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-115 Classification: Accepted

Site Names: UPR-200-E-115, UN-200-E-115, ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread Inside 241-AX

Site Type:Unplanned ReleaseStart Date:1974Site Status:InactiveEnd Date:1974

Site UPR-200-E-115 was liquid release to the soil around the 241-AX-103 Pump Pit inside the tank

Description: farm. The site is not separately marked or posted.

Waste Type: Process Effluent

Waste Contaminated liquid from the 241-AX-103 pump pit effected the ground adjacent to the pump

Description: pit. Dose rates up to 2,000 millirad per hour were detected.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-118 Classification: Accepted

Site Names: UPR-200-E-118, UN-200-E-118, Airborne ReClassification: Rejected (Consolidation) (6/13/

Release from 241-C-107

Site Type:Unplanned ReleaseStart Date:1957Site Status:InactiveEnd Date:1957

Site The release site is not separately marked or posted.

Description:

Waste Type: Soil

Waste The contaminated particles on the ground surface read up to 3,000 counts per minute.

Description:

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-119 Classification: Accepted

Site Names: UPR-200-E-119, UN-200-E-119, ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread Inside 241-AX

Site Type:Unplanned ReleaseStart Date:1969Site Status:InactiveEnd Date:1969

Site The release occurred on the ground near the 241-AX-104 Tank. It is not separately marked or

Description: posted from the rest of the tank farm.

Waste Type: Process Effluent

Waste The release consisted of high-level waste from Tank 241-AX-104 dripping onto the soil from a

Description: contaminated electrode cable that had been inside the 241-AX-104 tank.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-125 Classification: Accepted

Site Names: UPR-200-E-125, UN-200-E-125, 241-A- ReClassification: Rejected (Consolidation) (6/13/

104 Release

Site Type: Unplanned Release Start Date: 1975

Site Status: Inactive End Date: 1975

Site The release is within the 241-A Tank Farm fence. The site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 9463 liter (2500 gallon), containing 18,000 curies of cesium-137 with levels

Description: reading to 6,450 counts per minute, was released from the 241-A-104 tank.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-126 Classification: Accepted

Site Names: UPR-200-E-126, UN-200-E-126, 241-A- ReClassification: Rejected (Consolidation) (6/13/

105 Tank Leak

Site Type: Unplanned Release Start Date: 1965
Site Status: Inactive End Date: 1965

Site The unplanned release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 18,900 liters (5000 gallons) of waste leaked from the tank that was deformed

Description: after a sudden, volatile release of steam.

The Site Was Consolidated With:

Site Code: 200-E-131

Site Names: 200-E-131, Contaminated Soil Associated with 241-A Tank Farm Complex

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-136 Classification: Accepted

Site Names: UPR-200-E-136, UN-200-E-136, 241-C- ReClassification: Rejected (Consolidation) (6/13/

101 Tank Leak

Site Type:Unplanned ReleaseStart Date:1946Site Status:InactiveEnd Date:1970

Site The release, inside the 241-C Tank Farm under Tank 241-C-101, is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste It is estimated that between 64,600 and 91,200 liters (17,000 and 24,000 gallons) of waste, containing 2,000 curies of radionuclides, has leaked from the 241-C-101 tank. The tank was

active from 1946 through 1970 and received bismuth phosphate metal waste, tributyl phosphate

process waste and PUREX coating waste.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-137 Classification: Accepted

Site Names: UPR-200-E-137, UN-200-E-137, 241-C- ReClassification: Rejected (Consolidation) (6/13/

203 Leak

Site Type:Unplanned ReleaseStart Date:1947Site Status:InactiveEnd Date:1977

Site The release, at the 241-C-203 Single-Shell Tank, is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste Approximately 1520 liters (400 gallons) of liquid, containing high level PUREX waste, has

Description: leaked from the 241-C-203 tank.

The Site Was Consolidated With:

Site Code: 200-E-133

Site Names: 200-E-133, Contaminated Soil at C Farm

Reason: Within Boundary Of Larger Site

200-PO-6

Site Code: 200-E8 BPDS Classification: Accepted

Site Names: 200-E8 BPDS, 200-E8 Borrow Pit ReClassification: Closed Out (10/26/1995)

Demolition Site, 200-E Burn Pit Demolition Site, 218-E-8 Borrow Pit

Demolition Site

Site Type:Depression/Pit (nonspecific)Start Date:1984Site Status:InactiveEnd Date:1995

Site The chemical demolition site is no longer marked or posted.

Description:

Waste Type: Chemicals

Waste This unit had detonations of the following chemicals: 1984: Isopropyl Ether 8 L (2.1 gal), 1,4Description: Dioxane 1,250 mL (0.33 gal), 2-Butoxyethanol 19 L (5.0 gal), Methyl Ethyl Ketone 177 mL

(0.05 gal), Hydrogen Peroxide 11.36 L (3.0 gal), Dioxane 946 mL (0.25 gal), Sodium Azide 473

mL (0.12 gal), Phosphoric Acid 189 L (0.05 gal); 1985: None; 1986: None.

200-PW-1

Site Code: 216-T-19 Classification: Accepted

Site Names: 216-T-19, 241-TX-153 Crib and Tile Field, ReClassification:

216-TX-1, 241-TX-3, 216-T-19TF

Site Type:CribStart Date:1951Site Status:InactiveEnd Date:1980

Site The crib and tile field are enclosed within a chain barricade. The crib is enclosed within a second chain barricade that is posted with Cave-In Potential signs. The outer chain is posted with

"Underground Radioactive Material" signs.

The site construction is wooden crib box with a riser, set into a square bottom pit with sloping sides. The crib has an inlet and outlet pipe. The outlet pipe connects to a tile field. The tile field consists of a central pipe running the length of a rectangular trench with sloping sides. Pipes branch off the main pipe over the length of the trench. After construction, the crib and tile field were backfilled to grade.

Waste Type: Process Effluent

Waste The site received waste containing nitrate, sodium, ammonium nitrate, sulfate, and phosphate.

Description:

Site Code: 216-Z-1&2 Classification: Accepted

Site Names: 216-Z-1&2, 234-5 No. 1 Crib, 216-Z-7, ReClassification:

234-5 No. 2 Crib, 216-Z-1 & 2TF, 216-Z-1

and 216-Z-2 Cribs

Site Type:CribStart Date:1949Site Status:InactiveEnd Date:1969

Site The 216-Z-1&2 Cribs consist of two wodden timber boxes connected by a central pipe. The 216-

Description: Z-2 crib overflowed into the 216-Z-1 crib which overflowed into the 216-Z-1A tile field. Each

unit is set and backfilled in a deep, square excavation. Two risers are visible from the surface of

each crib.

Waste Type: Process Effluent

Waste The 216-Z-1 and 2 Cribs received liquid process waste from the 234-5Z Building. The cribs received aqueous and organic wastes from the Plutonium Reclamation Facility, Americium

Recovery Line wastes from the 236-Z and 242-Z Buildings, and uranium wastes from the 236-Z

Recovery Line wastes from the 250-Z and 242-Z buildings, and trainfull wastes from the 250-Z

Building.

Site Code: 216-Z-1A Classification: Accepted

Site Names: 216-Z-1A, 216-Z-1A Tile Field, 216-Z-7, ReClassification:

234-5 Tile Field, 216-Z-1AA, 216-Z-1AB,

216-Z-1AC

Site Type: Drain/Tile Field Start Date: 1949
Site Status: Inactive End Date: 1969

Site Description:

The tile field is located inside a chain link fence. It is a below grade trunk line orientated north to south with seven pairs of lateral pipes spaced in a herring bone pattern. The vitrified clay pipe lies on a gravel bed. The length of the tile field was expanded twice. The original section is known as 216-Z-1AA. The expanded sections are known as 216-Z-1AB, and 216-Z-1AC. The excavation was backfilled to grade. The fence is radiologically posted.

Waste Type: Process Effluent

Waste Description:

The 216-Z-1A Tile Field originally received overflow from the 216-Z-1 and the 216-Z-2 Cribs. The cribs received aqueous and organic wastes from the Plutonium Reclamation Facility, americium recovery line wastes from the 236-Z and the 242-Z Buildings, and uranium wastes

from the 236-Z Building.

Site Code: 216-Z-3 Classification: Accepted

Site Names: 216-Z-3, 216-Z-3 Culvert, 216-Z-8, 234-5 **ReClassification:**

No. 3 & 4 Cribs

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1959

Description:

The 216-Z-3 Crib was constructed of three 1.2 meter (4 foot) long, perforated corrugated metal culverts that were laid horizontally, end to end, on a gravel filled excavation. Wire screens were welded on the ends of the pipes to prevent gravel from intruding into the pipe. 2.5 centimeter (1 inch) holes were drilled every 15 centimeters (6 inches) around the circumference of the pipe at 30 centimeter (1 foot) intervals. The culvert rests on a 5 meter (17 foot) bed of gravel, 2.4 meters (8 feet) below grade. Two layers of asphalt roofing paper were laid over the crib construction and the site was backfilled to grade.

Waste Type: Process Effluent

Waste The site received process waste, analytical and development laboratory wastes from the 234-5Z

Description: Building via the 241-Z Settling Tank. The waste was neutral to basic.

Site Code: 216-Z-9 Classification: Accepted

Site Names: 216-Z-9, 216-Z-9 Cavern, 234-5 Recuplex ReClassification:

Cavern, 216-Z-10, 216-Z-9 Crib, 216-Z-9

Covered Trench

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1962

Site Description:

The 216-Z-9 trench is marked and posted with Underground Radioactive Material signs. In 1999, a gravel bio-barrier, measuring 6.1 meter (20 feet) by 4 meters (13 feet), was placed over an area of surface contamination. This area is also posted as Underground Radioactive Material.

The 216-Z-9 Crib is an inactive, below grade waste management unit. It is a rectangular structure, with a concrete cover supported by six concrete columns with a concrete cover. The trench walls and support columns are covered in an acid resistant brick. Two stainless steel pipes discharge effluent above the trench bottom.

Waste Type: Process Effluent

Waste **Description:** The trench received aqueous process waste, and organic process waste. The aqueous process waste is characterized as an acidic, high salt, low level radioactive waste, and the organic process is considered slightly acidic, low salt, high organic, radioactive liquid waste with intermediate levels of plutonium and other transuranic components. Fabrication oil used as a cutting and milling lubricant was estimated to be 50% carbon tetrachloride and 50% lard oil. The site received an estimated 270,000 to 460,000 liters of carbon tetrachloride as waste.

216-Z-12 **Classification:** Accepted **Site Code:**

ReClassification: Site Names: 216-Z-12, 241-Z-12 Crib

Site Type: Crib **Start Date:** 1959 End Date: 1973 **Site Status:** Inactive

Site **Description:** The site is an inactive, below-grade waste management unit. The site consists of a deep rectangular excavation with a vitrified, perforated, clay pipe running the length of the crib. A second smaller pipe runs the length of the crib to the west of the original pipe. The bottom 1.5 meters (5 feet) of the excavation was backfilled with gravel and covered with a polyethylene barrier. The remaining excavation was backfilled to grade. It is marked and posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste **Description:** The site received process waste and analytical and development laboratory waste from the 234-5Z Building via the 241-Z-361 Settling Tank. The waste is slightly acidic. Low salt waste was adjusted to a pH of 8 to 10 before disposal. The waste disposed of at the crib included

plutonium.

Site Code: 216-Z-18 **Classification:** Accepted

Site Names: 216-Z-18, 216-Z-18 Crib **ReClassification:**

1969 Crib **Start Date:** Site Type: **Site Status:** Inactive **End Date:** 1973

Site

The 216-Z-18 Crib is a below grade inactive management unit. The crib consists of five parallel, **Description:** north-south running trenches bisected by a steel distribution pipe. Near the center of each trench

two perforated, fiberglass reinforced epoxy pipes exit each side of the distribution line. The distribution and trench piping lie on a 0.3-meter (1-foot) thick bed of gravel. The pipes were buried under an additional 0.3 meters (1 foot) of gravel, a membrane, and sand cover. The trenches were then backfilled to grade. The site is marked and posted with Underground

Radioactive Material signs.

Waste Type: Process Effluent

The crib received solvent and acidic aqueous waste from the Plutonium Reclamation Facility in Waste the 236-Z Building. The crib received high salt, acidic, and organic liquid waste. Wastes **Description:**

disposed of at the site include carbon tetrachloride, tributyl phosphate, and plutonium.

Site Code: 241-Z-361 **Classification:** Accepted

241-Z-361, 241-Z-361 Settling Tank, **ReClassification: Site Names:**

IMUST, Inactive Miscellaneous

Underground Storage Tank

Settling Tank 1949 Site Type: **Start Date:** 1976 **Site Status:** Inactive **End Date:**

Site **Description:**

liner. The tank has inside dimensions of 7.9 by 4.0 meters (26 by 13 feet) with 0.3 meter (1 foot) thick walls. The bottom slopes, resulting in a internal height variation between 5.2 and 5.5 meters (17 and 18 feet). The top is 0.6 meters (2 feet) below grade. A 15 centimeter (6 inch) stainless steel inlet pipe from the 241-Z Tank Pit (WIDS SiteCode 241-Z) enters the tank from the north. A single 20 centimeter (8 inch) stainless steel pipe exits the tanks from the south. There are two manhole covers and frames and several risers visible above grade.

The unit is an underground reinforced concrete structure with a 0.95 centimeter (3/8 inch) steel

Process Effluent **Waste Type:**

The unit received radioactively contaminated liquid. The tank is estimated to contain a residual Waste 30 to 75 kilograms (66 to 165 pounds) plutonium in the sludge. (See HNF-8735 for detailed **Description:**

sludge sample analysis)

Site Code: UPR-200-W-103 Classification: Accepted

ReClassification: Site Names: UPR-200-W-103, 216-Z-18 Line Break,

UN-216-W-13, UN-200-W-103, Pipe Line

Leak

Site Type: Unplanned Release **Start Date:** 1971 1971 **Site Status:** Inactive **End Date:**

The release site is posted with "Underground Radioactive Material" warning signs. Site

Description: Contamination still remains under the clean soil.

Waste Type: Process Effluent

Waste The release contained approximately 10 grams of plutonium with gross alpha contamination

Description: greater than 6,000,000 disintegrations per minute.

Site Code: UPR-200-W-110 **Classification:** Accepted

Site Names: UPR-200-W-110, Contaminated Soil from **ReClassification:**

216-Z-1, UN-216-W-20 Spoil Trench

Site Type: Trench Start Date: 1971 **Site Status:** Inactive **End Date:**

1971 The site is a one-time use waste disposal trench. The trench is the location where backfill material Site

> from the north end of the 216-Z-1 Ditch was placed following excavation for a new ditch. During construction for the 216-Z-19 Replacement Ditch, workers placed the excavated material on a spoils pile. Later that material was found to be contaminated and it was moved to the disposal

trench.

Description:

The ditches and the trench have been backfilled and are co-located within an "Underground Radioactive Material" (URM) zone. This area was surface stabilized in 1982. The area is marked with concrete posts and an intermittent light chain.

The site is vegetated with crested wheatgrass and Indian ricegrass over very sandy soil. There is

evidence of rodent burrowing on and adjacent to the URM area. An air monitor is on the site at the north end.

Waste Type: Soil

Waste Description:

Decayed vegetation matting from the bottom of the 216-Z-1 Ditch was found to contain alpha contamination to a maximum of 100,000 disintegrations per minute. The 216-Z-1 Ditch was contaminated with americium and plutonium originating from process leaks contaminating the Z Plant cooling water discharge system. The contamination subsequently settled out of the water or was absorbed by aquatic plant life growing on the sides and bottom of the ditch.

Radioactivity computed from soil samples taken from the spoil pile showed an alpha concentration of 0.34 nanocuries per gram of soil. This was 30 times less than the minimum 10 nanocuries per gram standard that required "packaging for recovery" plutonium burials.

200-PW-2

Site Code: 216-A-1 Classification: Accepted

Site Names: 216-A-1, 216-A-1 Cavern, 216-A-1 Trench ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-A-1 and 216-A-7 cribs are located within the same radiologically posted area. They are

Description: marked and posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received the depleted uranium waste from the cold startup run in the 202-A Building.

Description: Some cesium-137, cobalt-60 and strontium-90 is also present.

Site Code: 216-A-3 Classification: Accepted

Site Names: 216-A-3, 216-A-3 Cavern, 216-A-3 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1981

Site The crib is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste Until November 1967, the site received wastes from the silica-gel regeneration in the 203-A **Description:** Building, the uranyl nitrate hexahydrate (UNH) storage pit drainage, and the liquid waste from

the 203-A Pump House. After November 1967, the site received UNH Storage Pit drainage, liquid drainage, liquid waste from the 203-A Building enclosure sumps, and the heating coil condensate from the P1 through P4 UNH tanks. Between 1967 and 1970, the site discontinued receiving discharge from silica-gel regeneration wastes. The above wastes are reworked through the uranium cycle and any resulting waste with low radioactivity are sent to 216-A-29. The

waste included uranium, cesium-137, strontium-90 and ruthenium-106.

Site Code: 216-A-5 Classification: Accepted

Site Names: 216-A-5, 216-A-5 Cavern ReClassification:

Site Type: Crib Start Date: 1955
Site Status: Inactive End Date: 1966

Site The crib is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste Until November 1961, the site received process condensate from the 202-A Building. From **Description:** November 1961 to October 1966, the site was active but received no waste (backup for the 216-

A-10 Crib). In October 1966, the site received process condensate from the 202-A Building.

The waste is acidic.

Site Code: 216-A-10 Classification: Accepted

Site Names: 216-A-10, 216-A-10 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1987

Site The site is covered with gravel with no vegetation growing on it. It is surrounded with light posts

Description: and chain and posted as Underground Radioactive Material.

Waste Type: Process Effluent

Waste Description:

During 1956, the site was used only for testing purposes using nonradioactive water. From 1956 to November 1961, the site was inactive. From November 1961 to January 1978, the site received process condensate from the 202-A Building. From January 1978 to October 1981, the site was again inactive. From October 1981 to 1986, the site received the process condensate from the 202-A Building. The crib received Process Distilate Discharge (PDD), a corrosive/mixed waste, at an average flow rate of 227 liters/minute (60 gallon/minute). The

corrosive/mixed waste, at an average flow rate of 227 liters/minute (60 gallon/minute). The discharge was an acidic waste stream generated from two product concentrators in the Plutonium Uranium Extraction (PUREX) process. The pH of this waste ranged from 1.0 to 2.5 standard units which makes it a corrosive mixed waste. Approximately 62.6 million kilograms (138)

million pounds) of waste were disposed of in the crib in 1986.

Site Code: 216-A-18 Classification: Accepted

Site Names: 216-A-18, 216-A-18 Excavation, 216-A-18 ReClassification:

Grave, 216-A-18 Sump, 216-A-18 Crib

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1955

Site The site is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Chemicals

Waste The site received the depleted uranium waste from the cold start-up run at 202-A Building.

Description:

Site Code: 216-A-19 Classification: Accepted

Site Names: 216-A-19, 216-A-19 Test Hole, 216-A-19 ReClassification:

Grave, 216-A-19 Sump, 216-A-19 Crib

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1956

Site The site is marked and posted with Underground Radioactive Material signs. In February 2001, a

Description: narrow area posted with Soil Contamination Area signs extended between the 216-A-19 southern

site boundary and northern boundary of 216-A-34.

Waste Type: Water

Waste The site received the 241-A-431 Building contact condenser cooling water via the 216-A-34 **Description:** Ditch and the depleted uranium waste from the cold start-up run at the 202-A Building.

Site Code: 216-A-20 Classification: Accepted

Site Names: 216-A-20, 216-A-20 Test Hole, 216-A-20 ReClassification:

Grave, 216-A-20 Sump, 216-A-20 Crib

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1955

Site The site is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Water

Waste The site received the 241-A-431 Building contact condenser cooling water via the 216-A-34 **Description:** Ditch and the depleted uranium waste from the cold start-up run at the 202-A Building.

Site Code: 216-A-28 Classification: Accepted

Site Names: 216-A-28, 216-A-28 French Drain, 216-A- ReClassification:

28 Crib

Site Type:CribStart Date:1958Site Status:InactiveEnd Date:1967

Site The site is not currently marked or posted.

Description:

Waste Type: Process Effluent

Waste The site received the liquid waste from the 203-A Building enclosure sumps and the heating coil condensate from the P1 through P4 uranyl nitrate hexahydrate (UNH) tanks. The waste is low in

salt and is neutral to basic. Uranium may have been discharged to the waste site.

Site Code: 216-A-36A Classification: Accepted

Site Names: 216-A-36A, 216-A-36 Crib ReClassification:

Site Type:CribStart Date:1965Site Status:InactiveEnd Date:1966

Site The 216-A-36A and 216-A-36B cribs are located inside a common light post and chain area. The

Description: 216-A-36A is the at the north end of the chained area. The large chained area is posted with

Underground Radioactive Material signs, but the risers near the center of the cribs are posted with

Soil Contamination signs.

Waste Type: Process Effluent

Waste The site received the ammonia scrubber waste from the 202-A Building. The waste is low in salt

Description: and is neutral to basic. The site was deactivated because of a large discharge of fission

products. In December 1965, it was calculated (from bore hole soil samples) that approximately 400,000 curies of contaminants had been discharged to the crib that included 1600 curies of

cesium-137.

Site Code: 216-A-36B Classification: Accepted

Site Names: 216-A-36B, 216-A-36 Crib, Purex

Ammonia Scrubber Distillate (ASD)

ReClassification:

Site Type:CribStart Date:1966Site Status:InactiveEnd Date:1987

Site Description:

The 216-A-36B portion of the crib is located inside the same light post and chain area as the 216-A-36A Crib. The 216-A-36B is the southern end of the chained area. The large chained area is posted with Underground Radioactive Material signs, but the risers near the center of the cribs are posted with Soil Contamination Area signs. The 216-A-36B portion of the chained area is considerably larger than the 216-A-36A portion.

Waste Type: Process Effluent

Waste Description:

Until October 1972, the site received the ammonia scrubber waste from the 202-A Building (Plutonium Uranium Extraction [PUREX]). The site was retired in October 1972 when the PUREX plant shut down. In November 1982, the site was reactivated to receive the above wastes when PUREX operations resumed. The waste is low in salt and is neutral to basic. The concentrations of ammonium hydroxide discharged to the crib resulted in the waste stream being classified as a dangerous waste.

Site Code: 216-B-12 Classification: Accepted

Site Names: 216-B-12, 216-ER Crib, 216-ER-1,2,3 ReClassification:

Cribs

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1973

Site The crib is marked and posted with Underground Radioactive Material and Cave-in Potential

Description: signs.

Waste Type: Process Effluent

Waste Description:

From November 1952 to December 1957, the site received the process condensate waste from the tributyl phosphate uranium recovery processes at the 221-U and 224-U Buildings as well as B Plant condensate. From December 1957 to May 1967, the site was inactive. From May 1967 to November 1967, the site received construction waste from 221-B Building. After November 1967, the site received process condensate from 221-B Building. The waste is low in salt and is neutral to basic.

Site Code: 216-B-60 Classification: Accepted

Site Names: 216-B-60, 216-B-60 Crib ReClassification:

Site Type:CribStart Date:1967Site Status:InactiveEnd Date:1967

Site The crib is not visible because the 225-B Building was built on top of the crib site in 1975. There

Description: is a sign posted on the south wall of the 225-B building indicating where the 216-B-60 crib is

located.

Waste Type: Process Effluent

Waste Description:

The site received the cell cleanout solid and liquid waste from the 61 centimeter (24 inch) 221-B Building cell cleanout drain line. The waste was low in salt and was neutral to basic.

Composite sample results indicated 715.5 kilograms of uranium, 0.08 grams of plutonium, 777

curies of Ce-144, 8 curies of Cs-137 and 5 curies of Eu-154.

Site Code: 216-C-1 Classification: Accepted

Site Names: 216-C-1, 216-C-1 Crib, 216-C Crib ReClassification:

Site Type:CribStart Date:1953Site Status:InactiveEnd Date:1957

Site The site is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste Description:

From January 1953 until September 1955, the site received high salt waste (HSW), cold-run waste, and the process condensate from the 201-C Building. From September 1955 to June 1957, the site received the HSW cold-run waste from the 201-C Building. Waste neutralized in the 241-CX-71 tank was discharged to this crib. The waste is high in salt and is neutral to basic.

Site Code: 200-E-58 Classification: Accepted

Site Names: 200-E-58, 216-A-5 Neutralization Tank, **ReClassification:**

Tank A5, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Neutralization TankStart Date:1955Site Status:InactiveEnd Date:1987

Site The site is an underground tank used to neutralize acidic waste prior to disposal. A 101-

Description: centimeter (40-inch) riser is visible at the surface.

The cylindrical tank sits vertically on a concrete pad. The tank is constructed of welded stainless steel and has a capacity of approximately 28,400 liters (7,500 gallons). A 20-centimeter (8-inch) inlet pipe enters from the north near the base of the tank. The inlet connects into distribution piping constructed of 20-centimeter (8-inch) stainless steel pipe welded into a cross with 1.9-centimeter (3/4-inch) holes drilled at 23-centimeter (9-inch) intervals. A 20-centimeter (8-inch) outlet pipe exits to the south near the top of the tank. A 101-centimeter (40-inch) riser extends 30 centimeters (12 inches) above the surface. The "charging riser" is for adding limestone to the tank to act as a neutralizing agent.

Waste Type: Process Effluent

Waste The tank was used to neutralize acid waste from PUREX prior to ground disposal. From 1955 **Description:** to 1961, the neutralized waste was discharged to the 216-A-5 Crib. From 1961 to 1987 the

neutralized waste was discharged to the 216-A-10 Crib.

Site Code: 270-E-1 Classification: Accepted

Site Names: 270-E-1, 270-E CNT, 270-E Condensate **ReClassification:**

Neutralization Tank, 216-ER-1, IMUST, Inactive Miscellaneous Underground

Storage Tank

Site Type:Neutralization TankStart Date:1952Site Status:InactiveEnd Date:1957

Site The site is an underground steel tank. It is marked and posted with Restricted Access-Inactive

Description: Tank signs. It is located within a large Underground Radioactive Material Area that resulted from

the stabilization of the adjacent 216-B-64 basin and UPR-200-E-64 sites.

Waste Type: Chemicals

Waste Description:

A 1974 report indicated the surface of the sludge was located at 2.27 meters (7.58 feet). No liquid was visible at this time. Sludge volume was estimated to be 14,440 liters (3,800 gallons). Radiation readings were less than 100 counts per minute direct and smearable, and less than 0.5 millirad/hour at the risers. Waste in this tank should include: limestone, process condensate precipitates, salts and residual process condensates. The process condensate that passed through this tank contained an average of 0.015 grams per gallon of uranium, 2.6 E-7 grams per gallon of plutonium and 1.8 E-6 curies per gallon of beta emitters.

Site Code: 216-S-1&2 Classification: Accepted

Site Names: 216-S-1&2, 216-S-5 Crib, 216-S-1 & 2 **ReClassification:**

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1956

Site Description:

The cribs are located within a common radiologically posted area. The surface is free of vegetation. The area is marked and posted with Underground Radioactive Material and Cave-in Potential signs. There is an additional, small posted Underground Radioactive Material area adjacent to the south side of the cribs and the 299-W22-11 well. The Dyncorp Integrated Soil, Vegetation and Animal Control group has stated that growing, contaminated weeds were found inside this area in September 2000. The contaminated weeds were removed and disposed of properly.

The site consists of two open-bottomed crib boxes made of timbers. The cribs are connected in series where overflow from the crib box S1 flows into crib box S2 via an underground pipe. The boxes were set in a gravel lined trench and backfilled.

Waste Type: Process Effluent

Waste Description:

The site received cell drainage from the D-1 Receiver Tank and process condensate from the D-2 Receiver Tank in the 202-S Building. The inorganics disposed of at the site were nitrate,

aluminum nitrate, nitric acid, and sodium.

Site Code: 216-S-7 Classification: Accepted

Site Names: 216-S-7, 216-S-7 Crib, 216-S-15 ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1965

Site The crib is marked and posted with Underground Radioactive Material and Cave-In Potential

Description: signs.

The unit consists of two wooden cribs measuring 4.9 meters (16.1 feet) square and 1.6 meters (5.2 feet). The crib boxes are set 15.3 meters (50 feet) apart, center to center, in one excavation. The cribs were set in gravel and covered with backfill. The two cribs are connected in series by a pipe, with one box overflowing into the other. Each crib box had two risers that extended to the surface.

Waste Type: Process Effluent

Waste Description:

From January 12, 1956 to April 12, 1959, the unit received REDOX cell drainage from the D-1 Receiver Tank, process condensate from the D-2 Receiver Tank, and condensate from the H-6 Condenser in 202-S Building. A buildup of beta activity in this crib prompted the rerouting of H-6 waste material. On April 12, 1959, jumper changes were completed that routed the H-6 liquid waste to the underground waste storage tanks. The crib continued to receive waste from D-1 and D-2 Vessels until July 1965. The chemicals disposed at the site included nitrate, aluminum nitrate, nitric acid, and sodium.

Site Code: 216-S-8 Classification: Accepted

Site Names: 216-S-8, Cold Aqueous Trench, Cold ReClassification:

Aqueous Crib, 216-S-3, Unirradiated Uranium Waste Trench, Cold Aqueous

Grave

Site Type:TrenchStart Date:1951Site Status:InactiveEnd Date:1952

Site The site consists of one trench that has been backfilled to grade. It is marked and posted with

Description: Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste Description:

The site received unirradiated start-up waste from the 202-S Building. The Monthly Report for October 1951 stated approval had been given for the excavation of a trench to receive uranium test run waste. Waste concentrations were estimated to be 0.2 grams of uranium per liter. The estimated total volume was expected to be only 152,000 liters (40,000 gallons). HW-28471 states that the trench was used between October 1951 through January 1952. This document states that a total of 309,700 liters (81,500 gallons) containing 193 kilograms (430 pounds) of unirradiated uranium was discharged to this trench.

Site Code: 216-U-1&2 Classification: Accepted

Site Names: 216-U-1&2, 361-WR (Crib 2), 216-U-3, ReClassification:

216-UR #1&2 Cribs, 216-U-1 & 2

Site Type:CribStart Date:1951Site Status:InactiveEnd Date:1967

Site The crib area has been surface stabilized with clean dirt. The cribs are co-located in a common Underground Radioactive Material area. Each crib is delineated with posts and chain with "Cave-

In Potential" signs.

Waste Type: Process Effluent

Waste Description:

From March 1952 to June 1957, the site received cell drainage from Tank 5-6 (221-U Building) and waste from the 224-U Building via the overflow from the 241-U-361 Settling Tank. From June 1957 to July 1957, the site received waste from the 224-U Building via the overflow from the 241-U-361 Settling Tank and contaminated solvent from the 276-U Settling Tank Solvent Storage area. The discharge of 221-U waste was discontinued during shutdown of production operations. From July 1957 to May 1967, the site received waste from the 224-U Building and equipment decontamination and reclamation wastes from Chemical Processing Division (CPD) Services Operations in the 221-U Building canyon. Crib 2 was deactivated in May 1967. The waste is low in salt and is neutral to basic.

Site Code: 216-U-5 Classification: Accepted

Site Names: 216-U-5, 216-U-4, 221-U Cold U Trench ReClassification:

#2

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site This site consists of a backfilled trench that is posted "Underground Radioactive Material".

Description:

Waste Type: Process Effluent

Waste This site received liquid unirradiated uranium waste from the cold start-up run at 221-U. The

Description: waste contained 200 kilograms of nitrate.

Site Code: 216-U-6 Classification: Accepted

Site Names: 216-U-6, U Facility Unirradiated Uranium **ReClassification:**

Waste Trench, 221-U Cold U Trench, 216-U Cold U Trench #1, 216-U-5, 221-U Cold

U Grave #1

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site This site consists of a backfilled trench that is posted "Underground Radioactive Material".

Description:

Waste Type: Process Effluent

Waste In March 1952, the site received liquid, unirradiated uranium waste from the cold start-up run at

Description: 221-U. The waste included 200 kilograms of nitrate.

Site Code: 216-U-8 Classification: Accepted

Site Names: 216-U-8, 216-WR-1,2,3 Cribs, 216-U-9 ReClassification:

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1960

Site The site is marked and posted with Underground Radioactive Material signs.

Description:

The site consists of three wood timber cribs set in series. Each crib is 4.9 by 4.9 by 3.0 meters deep (16 by 16 by 10 feet deep). The cribs were filled with 1.3-centimeter (0.5-inch) crushed

stone to the tops of the wooden structures. There is roughly 2,070 cubic meters (73,000 cubic feet) of gravel fill in the cribs.

Waste Type: Process Effluent

Waste The site received process condensate from 221-U and 224-U Buildings and the 291-U Stack

Description: drainage. The waste is acidic.

Site Code: 216-U-12 Classification: Accepted

Site Names: 216-U-12, 216-U-12 Crib ReClassification:

Site Type:CribStart Date:1960Site Status:InactiveEnd Date:1988

Site The site is marked and posted with Underground Radioactive Material" and Danger -Do Not

Description: Enter signs.

The bottom of the crib was filled with approximately 264 cubic meters (9,320 cubic feet) of gravel. A perforated 30-centimeter (12-inch) vitrified clay pipe runs horizontally the length of the unit below grade.

Waste Type: Process Effluent

Waste Description:

From April 1960 to May 1967, the site received 291-U-1 Stack drainage, 244-WR Vault waste, and 224-U process condensate via the C-5 Tank. Contaminated water from the 241-WR Vault was discharged to the crib in October 1965 that included 3.14 kilograms (6.9 pounds) thorium. From May 1967 to September 1972, the site received the above wastes (excluding the 241-WR Vault waste) and occasional waste via the C-7 Tank in the 224-U building. From September 1972 to November 1981, the site was taken out of service. From November 1981 to January 1987, the site received corrosive process condensate (corrosive: [D002] typical pH range is 0.5-1.5) from the 224-U building. The crib also received miscellaneous storm drain wastes from 224-U building.

Site Code: 241-U-361 Classification: Accepted

Site Names: 241-U-361, 241-U-361 Settling Tank, 361- ReClassification:

U-TANK, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Settling TankStart Date:1951Site Status:InactiveEnd Date:1967

Site The 241-U-361 Tank is an underground settling tank constructed of reinforced concrete. The 216-

Description: U-1&2 Cribs and the 241-U-361 Settling Tank are co-located within a common radiologically

controlled area. It is posted with Underground Radioactive Material (URM). The surface surrounding the settling tank has been covered with shotcrete. The tank is posted with Inactive

Miscellaneous Underground Storage Tank (IMUST) signs.

Waste Type: Process Effluent

Waste The tank received radioactively contaminated liquid from U Plant. It is presently estimated to contain 104,100 liters (27,500 gallons) of sludge with an unknown plutonium content. Sample

data collected in 1976 estimated the tank contained 760 curies of strontium-90, 1365 curies of

cesium-137, 69,000 kilograms of uranium and less than one gram of plutonium.

Site Code: 200-W-22 Classification: Accepted

Site Names: 200-W-22, 203-S/204-S/205-S Stabilized ReClassification:

Area

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1983

Site All above ground surface features have been removed. The site is currently posted as an

Description: Underground Radioactive Material Area (URMA). There are also two small, posted URMA's

located under the abandoned steam line, on the south end of this site.

Waste Type: Soil

Waste Waste processed and stored in this area included contaminated UNH from REDOX and **Description:** PUREX, Thorium Nitrate from PUREX, 100-N Reactor decontamination waste and 300 Area

Laboratory waste. Radiological contaminants may be present in and around the remaining contaminated structures (cement basins and piping) that were not removed in the 1983

stabilization efforts.

The Following Sites Were Consolidated With This Site:

Site Code: 200-W-23

Site Names: 200-W-23, 203-S, 205-S, Underground Contaminated Zone

Reason: Duplicate Site

Site Code: 200-W-23 Classification: Rejected (4/26/2000)

Site Names: 200-W-23, 203-S, 205-S, Underground ReClassification:

Contaminated Zone

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This site has been rejected as a duplicate of 200-W-22 (203-S/204-S/205-S Stabilized Area).

Description: Also see WIDS Site 203-S & 205-S for demolished facility information. These structures are

contaminated facility components that remain below grade within an Underground Radioactive

Material Area.

The Site Was Consolidated With:

Site Code: 200-W-22

Site Names: 200-W-22, 203-S/204-S/205-S Stabilized Area

Reason: Duplicate Site

Site Code: 200-W-42 Classification: Accepted

Site Names: 200-W-42, U Plant Radioactive Process **ReClassification:**

Sewer from 221-U to 216-U-8 & 216-U-12

Cribs

Start Date: 1952 Site Type: Radioactive Process Sewer **End Date:** 1988 **Site Status:** Inactive

Site **Description:** The site is marked with steel posts and "Pipeline" signs along the entire length. A portion of pipeline located north of 16th Street had been posted as a "Soil Contamination Area" until it was stabilized in October 2001. The section of pipeline located south of 16th Street to the 216-U-8 Crib was interim stabilized with 61 centimeters (2 feet) of soil and is posted with AC-540 concrete posts. The site is posted as "Underground Radioactive Material." This contamination area south of 16th Street also described in sitecode UPR-200-W-163. The contamination area over the pipeline north of 16th Street is considered a part of this pipeline site.

Waste Type: Process Effluent

Waste **Description:** From April 1960 to May 1967, the pipeline received waste from the 291-U-1 Stack drainage, 241-WR Vault waste, and 224-U process condensate via C-5 Tank. Disposal of contaminated water from 241-WR Vault was accomplished in October 1965 and included 3.14 kilograms (6.9 pounds) of thorium. From May 1967 to September 1972, the site received the above wastes excluding the 241-WR Vault waste and occasional waste via the C-7 Tank in the 244-U Building. From September 1972 to November 1981, the site was taken out of service. After November 1981, the pipeline received process condensate (corrosive: typical pH range is 0.5-1.5) from the 224-U Building. In the past, this facility also received miscellaneous storm drain wastes from 224-U. A Limited Field Investigation was done in 1994 to characterize selected waste sites in the 200-UP-2 Operable Unit. Fourteen surface and subsurface soil samples along with four vegetation samples were collected to characterize the vitrified clay pipeline (VCP) leading to the 216-U-8 Crib. An attempt was made to determine if the contamination had spread laterally from the pipeline by digging holes with an auger rig where subsurface contamination had been identified. An increase in activity was noted at approximately 3 meters (10 feet). At a depth of 3.3 meters (11 feet) the auger was stopped by large cobbles. The samples were analyzed for cesium-137, strontium-90, gross alpha and gross beta. Specific sample data is documented in BHI-00033.

The Following Sites Were Consolidated With This Site:

UPR-200-W-163 **Site Code:**

Site Names: UPR-200-W-163, Contaminated Vegetation at the 216-U-8 Pipeline (200-W-42), UN-216-W-33

Reason: Within Remediation Layback Area

Site Code: 270-W **Classification:** Accepted

Site Names: 270-W, 270-W Tank, 270-W **ReClassification:**

> Neutralization Tank, IMUST, Inactive Miscellaneous Underground Storage Tank

Neutralization Tank Start Date: 1952

Site Status: Inactive **End Date:** 1960

There is no visual evidence for this tank. A review of drawings indicates the 2715 UA building Site

Description: was placed over the 270-W tank. The unit consists of an underground, stainless steel tank that is 2.7 meters (9 feet) tall and 2.7 meters (9 feet) in diameter. The nominal capacity of the tank is

14,300 liters (3780 gallons).

Waste Type: Process Effluent

Site Type:

Waste Description:

The unit was filled with limestone and used to neutralize acidic 224-U process condensate from the UO3 plant operation. Contributors to the process condensate included feed UNH concentrator offgas, calciner offgas, phosphoric acid, and potassium hydroxide. Analyses of process condensate samples have revealed trace amounts of hydrogen fluoride, mercury, acetone, 1-butanol, 2-butanone, and n-nitrosodiumethylamine. Analysis of the last liquid to flow through the tank revealed beta emitters, uranium, and plutonium. (Harlow Internal Memo states: 2.64 E-9 curies per gallon of beta emitters, 9.69 E-5 grams per gallon of uranium and 1 E-9 grams per gallon of plutonium - unit conversion = 6.97 E-10 curies per litter of beta emitters, 2.56 E-5 grams per liter of uranium, and 2.64 E-9 grams per liter of plutonium).

Site Code: UPR-200-E-39 Classification: Accepted

Site Names: UPR-200-E-39, Release from 216-A-36B ReClassification:

Crib Sampler (295-A), UN-200-E-39

Site Type: Unplanned Release Start Date: 1968

Site Status: Inactive End Date:

Site The release site is not separately marked or posted. It is located inside a large surface stabilized

Description: area known as 200-E-103 that is posted as an Underground Radioactive Material area.

Waste Type: Process Effluent

Waste The site received pressurized PUREX ammonia scrubber waste containing fission products. The

Description: readings were 20 to 450 millirad/hour.

Site Code: UPR-200-E-40 Classification: Accepted

Site Names: UPR-200-E-40, Release from the 216-A- **ReClassification:** Rejected (1/19/2000)

36B Crib Sampler, UN-200-E-40

Site Type: Unplanned Release Start Date: 1968

Site Status: Inactive End Date:

Site The site is an unplanned release. The site is not separately marked or posted. It has been

Description: consolidated with 200-E-103, because it is located within the boundaries of the larger site. 200-E-

103 is a surface stabilized area that is posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The release consisted of contaminated liquid (ammonia scrubber) with maximum beta/gamma

Description: readings of 150 millirad/hour.

The Site Was Consolidated With:

Site Code: 200-E-103

Site Names: 200-E-103, Radiologically Controlled Area - South Side of PUREX, PUREX Stabilized Area

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-64 Classification: Accepted

Site Names: UPR-200-E-64, Radioactive Soil and Ant ReClassification:

Hills, UN-200-E-64, UN-216-E-36

Site Type: Unplanned Release Start Date: 1984

Site Status: Inactive End Date:

Site The site is a large area posted with chain and Underground Radioactive Material Area signs. The

Description: size and shape of the posted area has changed periodically as a result of annual radiological

surveys and clean up efforts.

Waste Type: Soil

Waste The contamination found in the soil and ant hills consisted predominantly of cesium-137 and

Description: strontium-90, with readings to 60,000 counts per minute. Several sources of contamination have

been suggested. A swab riser on an underground pipeline appears to be the source.

Site Code: UPR-200-W-19 Classification: Accepted

Site Names: UPR-200-W-19, 241-U-361 Overflow, UN- ReClassification:

200-W-19

Site Type: Unplanned Release Start Date: 1953

Site Status: Inactive End Date:

Site The site is an unplanned release. The area where the release occurred is currently marked as a

Description: "Underground Radioactive Material" (URM) area that also contains the 216-U-1 Crib, 216-U-2 Crib, the 241-U-361 Settling Tank. A portion of the 2607-W5 tile field is also included in the

URM area.

Waste Type: Chemicals

Waste The release contained an unknown quantity of organic wastes and cell drainage from the

Description: Tributyl Phosphate (TBP) and Uranium Trioxide (UO3) plants with readings to 11.5 rads/hour

at 7.6 centimeters (3 inches).

Site Code: UPR-200-W-36 Classification: Accepted

Site Names: UPR-200-W-36, Groundwater ReClassification:

Contamination at 216-S-1 and 216-S-2

Site Type: Unplanned Release Start Date: 1955

Site Status: Inactive End Date: 1955

Site The 216-S-1 & 2 cribs are currently bare ground, marked by concrete posts and a light chain,

Description: posted with "Underground Radiation Material" area and "Cave- in Potential" signs. The well is

painted yellow and marked 299-W22-3.

Waste Type: Process Effluent

Waste The 216-S-1 and 216-S-2 Cribs received cell drainage from the D-1 Receiver Tank and

Description: redistilled condensate from the D-2 Receiver Tank in the 202-S Canyon Building. The

inorganics found at the site include: aluminum, nitrate, nitric acid, and sodium. The radionuclides found at this site are: cobalt-60, americium-241, cesium-137, uranium, and

plutonium. An unknown volume of this waste entered the groundwater beneath the crib through

a rupture in the well casing.

During the time between the last normal reading from the well (June 1955) and the time the incident was discovered, about 7,500,000 liters (2,000,000 gallons) of liquid waste, with an estimated gross beta activity of 7,500 curies had passed into the crib. Also, within this span of time about 40 grams (1.4 ounces) of plutonium had entered the crib.

Site Code: UPR-200-W-163 Classification: Accepted

Site Names: UPR-200-W-163, Contaminated Vegetation ReClassification:

at the 216-U-8 Pipeline (200-W-42), UN-

216-W-33

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The release consisted of radiologically contaminated vegetation growing above site 200-W-42, the underground pipeline to the 216-U-8 crib. The area is currently posted with "Underground"

Radioactive Material" signs.

Because the pipeline that is the source of this release is a separate WIDS site (200-W-42), and the remediation of the pipeline will include the soil above it, this UPR is proposed to be consolidated

into 200-W-42.

Waste Type: Process Effluent

Waste The waste in the pipeline consisted of process condensate from the 224-U Building. The waste

Description: was acidic.

The Site Was Consolidated With:

Site Code: 200-W-42

Site Names: 200-W-42, U Plant Radioactive Process Sewer from 221-U to 216-U-8 & 216-U-12 Cribs

Reason: Within Remediation Layback Area

200-PW-3

Site Code: 216-A-2 Classification: Accepted

Site Names: 216-A-2, 216-A-2 Cavern, 216-A-2 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1963

Site The crib is covered with gravel and marked with concrete AC-540 posts. The crib is located

Description: within a larger URM, known as 200-E-103.

The unit consists of 15-centimeter (6-inch) perforated vitrified clay pipe lines. Two 6.1-meter (20-foot) lengths form a cross pattern horizontally, 6.4 meters (21 feet) below grade. It has approximately 1.8 meters (6 feet) of coarse rock with a volume of 140 cubic meters (5,000 cubic feet) and is backfilled over. The side slope from grade to 6.4 meters (21 feet) is 1:1.5 and from

6.4 meters (21 feet) to 8.2 meters (27 feet) is 1:2.

Waste Type: Process Effluent

Waste The site received organic wastes from the 202-A Building. The waste is low in salt and is

Description: neutral to basic.

Site Code: 216-A-7 Classification: Accepted

Site Names: 216-A-7, 216-A-7 Cavern ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1966

Site The crib is marked and posted with Underground Radioactive Material (URM) signs. Both the

Description: 216-A-7 and 216-A-1 cribs are inside this URM area.

Waste Type: Process Effluent

Waste From January 1956 through July 1959, the site received the catch tank overflow waste, the sump **Description:** waste, and the pump pit drainage from the 241-A-152 Diversion Box. From July 1959 to

November 1966, the site received the catch tank overflow waste and the pump pit drainage from the 241-A-152 Diversion Box. In November 1966, the site received the tri-butyl phosphate soltrol organic inventory from the 202-A Building. The waste is low in salt and is neutral to

basic.

Site Code: 216-A-8 Classification: Accepted

Site Names: 216-A-8, 216-A-8 Crib and Overflow Pond **ReClassification:**

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1991

Site The crib and overflow area are surrounded by chain and concrete AC-540 markers. They are

Description: posted with Underground Radioactive Material signs. Crib overflow was accomplished through a 40.6 centimeter (16 inch) diameter pipe exiting to the north at the east end of the crib (see H-2-56157). The pipe emptied into a narrow ditch that flowed northward. A small overflow pond was

excavated at the northeast end of the ditch to receive the excess waste water from the crib.

A 61 centimeter (24 inch) diameter, schedule 20, perforated distribution pipe is located 2.1 meters (7 feet) below grade along the length of the crib. The site contains approximately 5830 cubic meters (206,000 cubic feet) of gravel fill. The crib excavation side slope is 1:2. Four test risers extended above grade. A 20 centimeter (8 inch) diameter vent riser extended from the distribution pipe had been located at the west end of the crib. The vent riser was removed in 1995. Two layers of sisalkraft paper separate the gravel fill from the backfill. The 216-A-508 control structure is located west of the crib (See drawing H-2-56157).

Waste Type: Process Effluent

Waste **Description:** From 11/55 to 12/57, the site received condensate from the waste storage tanks in the 241-A and -AX farms. From 12/57 to 5/58, the site received the above effluents and cooling water from the contact condenser in the 241-A-431 Building. The site was inactive except for the following periods: 1/66-4/76, received condensate from 241-A and -AX farms; 1/78-4/78, received 241-A, -AX, & -AY farm condensate; 10/83, received 241-AY and -AZ farm condensate; 3/84, same as 10/83. In early 1985, flow was again diverted from the crib to doubleshell tanks.

Document RPP-7494 reports a total discharge of 1.18E+09 liters differing slightly from the WIDS total. Condensate has not been discharged to the crib since early 1985. The distribution box was filled with concrete in 1995 to permanently isolate the crib.

Site Code: 216-A-24 **Classification:** Accepted

Site Names: 216-A-24, 216-A-24 Crib **ReClassification:**

1958 **Site Type:** Crib **Start Date:** Inactive End Date: 1966 **Site Status:**

Site The site is surrounded with concrete AC-540 markers and posted with Underground Radioactive **Description:** Material signs.

The crib was built with four sections, each 107 meters (350 feet) long, separated by soil berms.

The sections were installed at increasingly lower elevations, to allow the effluent to cascade from one section to the next. The crib was constructed with a 38 centimeter (15 inch) diameter (perforated bottom half), galvanized, corrugated pipe, placed horizontally 3 meters (10 feet) below grade. The crib excavation has 46,750 cubic meters (1.65E+05 cubic feet) of gravel fill and is backfilled. There is a polyethylene barrier between the gravel and the backfill. The side slope is 1.5:1. Eight 20 centimeter (8 inch) diameter wells on concrete pads are located on this crib. The wells extend from the bottom of the crib to 0.9 meters (3 feet) above grade. Four 38centimeter (15-inch) corrugated risers extend from the distributor pipe to grade with filter box assemblies on top of the risers.

Waste Type: Process Effluent

Waste **Description:** The site received condensed vapors from the waste storage tanks in the 241-A and 241-AX Tank Farms via the 241-E-411 and 241-E-412 Contact Condensers from 1958 through the early 1960's and until 1966, via the 241-A-401 and A-417 Tank. This crib was constructed to receive the condensate after the 216-A-8 Crib reached its radionuclide capacity. The waste is low in salt, neutral to basic and has a record of organic content. The crib was believed to have been valved out in January 1966. However, it was found to still be receiving liquid in 1979 (Occurrence Report #79-113). The valve has since been closed. Because of this inadvertent use, the radionuclide exact inventory and waste volume are unknown for 1967 through 1979.

Document RPP-7494 reports a total discharge of 7.94E+08 liters differing slightly from the WIDS total.

Site Code: 216-A-31 Classification: Accepted

Site Names: 216-A-31 Crib ReClassification:

Site Type:CribStart Date:1964Site Status:InactiveEnd Date:1966

Site The crib is located inside a large Underground Radioactive Material area that has a WIDS

Description: sitecode of 200-E-103. The crib is marked with cement posts on four corners.

Waste Type: Process Effluent

Waste The site received organic waste from 202-A Building (L Cell - Pu concentration waste). The **Description:** waste was low in salt and is neutral to basic. Records show that 30,545 liters (8,070 gallons) of

organics have been discharged to the unit since startup.

Site Code: 216-A-508 Classification: Accepted

Site Names: 216-A-508, Control Structure for 216-A-8 ReClassification:

Crib, 216-A-8 Distribution Box

Site Type: Control Structure Start Date: 1955

Site Status: Inactive End Date: 1995

Site

Description:

Site Code: 216-A-524 Classification: Accepted

Site Names: 216-A-524, 216-A-524 Control Structure, **ReClassification:**

216-A 524 Weir, 216-A-24 Control

Structure

Site Type:Control StructureStart Date:1958Site Status:InactiveEnd Date:1966

Site The 216-A-524 Weir is an underground liquid effluent control structure. The weir is a concrete structure with the interior being divided vertically into three chambers. The outside dimensions

structure with the interior being divided vertically into three chambers. The outside dimensions are 4.9 meters (16 feet) by 2.4 meters (8 feet) and is 3.4 meters (11 feet) deep. The unit is

covered with two removable concrete cover slabs. The aboveground features have been removed.

Waste Type: Process Effluent

Waste The unit is an underground liquid effluent control structure for the 216-A-24 Crib and contains radioactively contaminated piping and cement. The amounts of radionuclides present are not

known. A document published in 1987 (K.H. Cramer) reported radiological readings of 500 counts per minute smearable contamination, 10,000 counts per minute direct beta/gamma on the

surface structures.

Site Code: 216-C-4 Classification: Accepted

Site Names: 216-C-4, 216-C-4 Crib ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1965

Site The crib has been surface stabilized. It is marked and posted with Underground Radioactive

Description: Material signs. An access area has been cut through the 209-E security fence.

Waste Type: Process Effluent

Waste The site received contaminated organic waste from the 276-C Building. The waste is low in salt

Description: and is neutral to basic.

Site Code: 200-E-23 Classification: Rejected (4/20/2000)

Site Names: 200-E-23, UN-216-E-33 Borrow Pit, UPR- ReClassification:

200-E-56 Borrow Pit

Site Type: Depression/Pit (nonspecific) Start Date: 1979

Site Status: Inactive End Date:

Site The borrow pit is not marked or posted, and is partially vegetated.

Description:

Waste Type: Soil

Waste After earthmoving equipment mistakenly dug into contaminated soil adjacent to the 216-A-24 crib, contaminated soil from other areas in 200 East Area were placed into the excavation to fill

up the hole.

Site Code: 216-S-13 Classification: Accepted

Site Names: 216-S-13, 276-S Crib, 216-S-6 ReClassification:

Site Type:CribStart Date:1952Site Status:InactiveEnd Date:1972

Site The crib is surrounded with steel posts and chain. It is posted with Underground Radioactive

Description: Material and Cave-In Potential signs. The unit is a square wooden crib box, with open bottom enclosed on four sides with sheathing. The crib box sits in a partially backfilled hole. The unit

was then backfilled to grade. The crib box has a riser vent, and one inlet pipe near the top of the

box.

Waste Type: Process Effluent

Waste The site received mixed, organic waste containing nitrate, methyl isobutyl ketone, and sodium dichromate. Radionuclides include cobalt-60, strontium-90 and cesium-137. The waste was low

in salt and is neutral to basic. A 1966 internal memo suggests that 25,000 gallons of hexone from the 276-S tanks 141 and 142 were discharged to the 216-S-13 crib over a three month time

period.

Site Code: 216-S-14 Classification: Accepted

Site Names: 216-S-14, Buried Contaminated Hexone,

Cold Organic Trench or Grave, 216-S-4

Burial Contaminated Hexone

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site The trench is not marked or posted. Some areas of distressed vegetation and bare ground are in

Description: the vicinity of the location indicated in historical documentation.

Waste Type: Chemicals

Waste Description:

The site received approximately 76,000 liters (20,000 gallons) of hexone (methyl isobutyl ketone) contaminated with trace amounts of unirradiated uranium used in the initial testing of the 202-S Building (REDOX). The site was retired when discharge of hexone to the unit was completed. The radionuclide content is unknown, but it is assumed to be low-level

ReClassification:

contamination.

In 1971 core drillings were taken at this site. There was a strong odor of hexone from each of the sample cores and core holes. No radioactivity was found and the site was released from radiation zone status.

Site Code: 216-U-15 Classification: Accepted

Site Names: 216-U-15, UN-216-W-10, 388-U Tank ReClassification:

 $Dumping,\,UPR\text{-}200\text{-}W\text{-}125,\,UN\text{-}200\text{-}W\text{-}$

158, U-152 Interface Crud Burial

Site Type: Trench Start Date: 1957
Site Status: Inactive End Date: 1957

Site The site is the result of a deliberate discharge of liquid waste into a hole in the ground. No **Description:** surface markers exist to identify the exact location of this waste unit. Originally, the site was

surface markers exist to identify the exact location of this waste unit. Originally, the site was delimited by a wooden fence and posted with "Underground Contamination" signs. The perimeter

fence and all identification markings of this site have disappeared.

Waste Type: Chemicals

Waste This site rece

Description:

Site Type:

This site received 26,500 liters (7,000 gallons) of waste from the 388-U Tank in the 276-U Solvent Building. The waste consisted of interface crud, activated charcoal, and diatomaceous

earth containing approximately 1 curie of fission products.

HW-50584 indicates conflicting information. The May 1957 monthly report states that 79,494 liters (21,000 gallons) of organic solution (RAX) was originally scheduled to be transferred to the PUREX plant, but was buried because it was found to be incompatible with the PUREX

process.

Site Code: UPR-200-E-56 Classification: Accepted

Site Names: UPR-200-E-56, 216-A-24 Crib Excavation, ReClassification:

Excavated Contamination Adjacent to 216-A-24 Crib, UN-200-E-56, UN-216-E-33

Unplanned Release Start Date: 1979

Site Status: Inactive End Date:

Site The site is currently a surface stabilized area located north of the west end of the 216-A-24 Crib.

Description: It is posted and marked as an "Underground Radioactive Material" area.

Waste Type: Process Effluent

Waste **Description:** The contamination found in the moist excavation included beta/gamma readings up to 8,000 counts per minute. When the mistakenly excavated soil was returned to the excavation area from 241-AN Tank Farm, there was not sufficient volume to fill the hole. It was decided to place contaminated soil and vegetation from several areas along the perimeter and tank farm fences to help fill the void before covering with a layer of clean dirt. Additional contaminated

soil from around the 244-A Lift Station was also disposed in this location in 1985.

Site Code: UPR-200-W-125 **Classification:** Accepted

Site Names: UPR-200-W-125, 216-U-15, UN-200-W-**ReClassification:** Rejected (1/25/2000)

125, UN-216-W-10

Site Type: Trench **Start Date:** 1956

Site Status: Inactive **End Date:**

Site WIDS site UPR-200-W-125 has been rejected based on documentation that verified it was a **Description:**

DUPLICATE of 216-U-15. Future updates and closeout information will only be added to 216-U-

15. This site will no longer be updated.

The site was a one-time use waste disposal unit A hole was dug in the ground and the material dumped and covered. Contamination was limited to a hole in the ground (which included interface crud, activated charcoal, and diatomaceous earth) near U Plant.

Waste Type: Process Effluent

The waste was 26,500 liters (7000 gallons) of interface crud, activated charcoal, and Waste

diatomaceous earth, containing about one curie of fission products. **Description:**

200-PW-4

Site Code: 207-A-SOUTH Classification: Accepted

Site Names: 207-A-SOUTH, 207-A, 207-A Retention ReClassification:

Basin, 207-A-SOUTH Retention Basin,

207-A South

Site Type:Retention BasinStart Date:1977Site Status:InactiveEnd Date:1989

Site The 207-A South basin consists of three, unlined concrete cells that are coated with a **Description:** polyurethane sealant. They are surrounded by a chain and posted as a Contamination Area.

The cells were fed from the pump pit, located between the 207-A South and 207-A North basins. A 10-centimeter (4-inch) fill line entered each cell inside the basin structure. A 7.6-centimeter (3-inch) drain line exits the bottom of the each cell.

Waste Type: Steam Condensate

Waste The unit was used for the interim storage of the 242-A Evaporator process condensate to allow

Description: for sampling and analysis prior to being discharged to the 216-A-37-1 Crib.

Site Code: 216-A-34 Classification: Accepted

Site Names: 216-A-34, 216-A-34 Ditch, 216-A-34 Crib ReClassification:

Site Type:DitchStart Date:1955Site Status:InactiveEnd Date:1957

Site The site is marked and posted with Underground Radioactive Material signs. It has a small amount of bunch grass vegetation growing on it. In February 2001, a posted Soil Contamination

Area extended northward from the edge of 216-A-34 to 216-A-19.

Waste Type: Water

Waste The site received the cooling water from the contact condenser in the 241-A-431 Building in route to the 216-A-19 and 216-A-20 Trenches. The site contains less than 1 curie total beta

activity.

Site Code: 216-A-37-1 Classification: Accepted

Site Names: 216-A-37-1, 216-A-37 Crib ReClassification:

Site Type:CribStart Date:1977Site Status:InactiveEnd Date:1989

Site The crib is marked and surrounded with concrete AC-540 markers and Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste The site received process condensate from the 242-A Evaporator. The process condensate had **Description:** been determined to be regulated as a mixed waste due to the presence of spent halogenated and

nonhalogenated solvents and for the toxicity of ammonia. The estimated annual quantity of dangerous waste was 4.912E+07 kilograms (1.083E+08 pounds), representing the maximum annual output of evaporator process condensate during operating campaigns.

Site Code: 216-A-45 Classification: Accepted

Site Names: 216-A-45, 216-A-45 Crib ReClassification:

Site Type:CribStart Date:1987Site Status:InactiveEnd Date:1991

Site The crib is surrounded with light post and chain. It is posted as an Underground Radioactive **Description:** Material area. There is a considerable amount of vegetation growing on the crib surface.

Waste Type: Process Effluent

Waste The unit received process condensate from the 202-A Building (PUREX). Discharge to this crib was discontinued in mid-1989 and the waste stream was routed to storage tanks (WHC-EP-

0367). TPA milestone M-17-20A required all discharge to the 216-A-45 Crib be ceased by September 1991. The Fourth Amendment to the TPA confirms that this milestone was met.

Site Code: 216-C-3 Classification: Accepted

Site Names: 216-C-3, 201-C Leaching Pit, 216-C-3 Crib ReClassification:

Site Type:CribStart Date:1953Site Status:InactiveEnd Date:1954

Site The crib is identified with a single AC-540 concrete marker post. The site is located inside a **Description:** larger posted Underground Radioactive Material area known as 200-E-41 (Strontium Semi-works

Stabilized Area).

The site consists of 10 centimeter (4 inch) pipes resting on a gravel bed creating a drain field type

crib

Waste Type: Process Effluent

Waste The site received waste from the 201-C, 215-C, and 271-C buildings. The waste is acidic.

Description:

Site Code: 216-C-5 Classification: Accepted

Site Names: 216-C-5, 216-C-5 Crib ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The crib is marked with concrete AC-540 markers and Underground Radioactive Material signs.

Description: It is located within the larger, surface stabilized area known as 200-E-41.

Waste Type: Process Effluent

Waste The site received the high salt waste (HSW) cold run waste from the 201-C Building. It received

Description: some waste that had passed through the 241-CX-71 Neutralization Tank.

Site Code: 216-C-7 Classification: Accepted

Site Names: 216-C-7, 216-C-7 Crib ReClassification:

Site Type:CribStart Date:1961Site Status:InactiveEnd Date:1983

Site The site is surrounded by steel post and chain. It is posted with Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste The site has received liquid waste from the 209-E Building Critical Mass Laboratory. The crib

Description: was placed on standby in 1983.

Site Code: 216-C-10 Classification: Accepted

Site Names: 216-C-10, 216-C-10 Crib ReClassification:

Site Type:CribStart Date:1964Site Status:InactiveEnd Date:1969

Site The site is marked with concrete AC-540 markers and Underground Radioactive Material signs.

Description: The surface is covered with gravel.

Waste Type: Process Effluent

Waste The site received process condensate and liquid waste from the 201-C Building. The waste was

Description: acidic.

Site Code: 209-E-WS-3 Classification: Accepted

Site Names: 209-E-WS-3, Critical Mass Laboratory ReClassification:

Valve Pit and Hold Up Tank (209-E-TK-111), IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Valve PitStart Date:1960Site Status:InactiveEnd Date:1989

Site The Valve Pit has a steel lid and is posted (as of March 2001) with "Radioactive Material,

Description: Internally Contaminated Systems Located Within, and Confined Space" and "IMUST" warning

signs.

Waste Type: Process Effluent

Waste The Semi-Works Source Aggregate Area Management Study Report states that no wastes are **Description:** present in the Critical Mass Laboratory Valve Pit. However, radioactive contamination is

present in the valve pit sump, although no specific waste inventories for this unit were found. The Hold Up tank was routinely sampled to verify plutonium levels were below limits prior to

discharging the contents to the crib.

SubSites:

SubSite Code: 209-E-WS-3:1

SubSite Name: 209-E-WS-3:1, 209-E-TK-111 Hold Up Tank

Classification: Accepted

ReClassification:

Description: The 209-E-TK-111 tank is currently inactive. It is a passively ventilated drain tank. A recent

vapor sample did not identify any flammable gas within the vessel.

The tank was used to hold condensate from the facility. It was routinely sampled to determine that plutonium levels were below limits prior to discharging the contents to the crib. Therefore, it is estimated to consist of residual water from condensate collection and low levels of plutonium. This tank meets the definition of an IMUST tank. However, it is managed as part of the 209-E facility.

It is a 189 liter (50 gallon) capacity tank lined with cadmium. It is located underground, adjacent to the CAR at the south end of the 209-E building. It is covered by a steel pit cover and posted with Radioactive Material, Contamination Area and Confined Space Entry signs.

Site Code: 216-S-4 Classification: Accepted

Site Names: 216-S-4, 216-S-7, 216-S-4 Sump or Crib, ReClassification:

UN-216-W-1

Site Type:French DrainStart Date:1953Site Status:InactiveEnd Date:1956

Site The site is marked and posted with Underground Radioactive Materials signs. The site is

Description: constructed of two vertically buried metal culvert pipes.

Waste Type: Process Effluent

Waste During August and September 1953, the site received condensate and cooling water from condensers on the 241-S-101 and 241-S-104 Tanks in the 241-S Tank Farm. After September

1953, the site received the cooling water but the condensate waste was routed to the 216-S-3

Crib. The chemical component of this waste was nitrate.

Site Code: 216-S-22 Classification: Accepted

Site Names: 216-S-22, 216-S-22 Crib ReClassification:

Site Type: Crib Start Date: 1957
Site Status: Inactive End Date: 1967

Site The crib is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste The site received liquid waste from the acid recovery facility in the 293-S Building. The

Description: chemicals disposed at the site were nitrate and sodium.

Site Code: 216-S-23 Classification: Accepted

Site Names: 216-S-23, 216-S-23 Crib ReClassification:

Site Type:CribStart Date:1969Site Status:InactiveEnd Date:1972

Site The crib is marked with concrete AC-540 markers and posted with Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste The site received REDOX process condensate from D-2 Receiver Tank in the 202-S Building.

Description: The waste is low in salt and is neutral to basic.

Site Code: 216-T-20 Classification: Accepted

Site Names: 216-T-20, 216-TX-2, 216-T-20 Crib, 241- **ReClassification:**

TX-155 Contaminated Acid Grave

Site Type:TrenchStart Date:1952Site Status:InactiveEnd Date:1952

Site The site has a small concrete block structure on the surface with a metal lid labeled Confined

Description: Space and Potential Internal Contamination. There is a single concrete marker with an

Underground Radioactive Material sign on it. The concrete block structure is surrounded with the

same type of cobbles that surround the powerhouse pond.

Waste Type: Process Effluent

Waste The site received contaminated nitric acid from 241-TX-155 Diversion Box Catch Tank.

Description:

Site Code: 216-U-16 Classification: Accepted

Site Names: 216-U-16, UO3 Crib ReClassification:

Site Type:CribStart Date:1984Site Status:InactiveEnd Date:1987

Site The crib is identified with concrete AC-540 markers and is posted with Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste The site received 224-U steam condensate, 224-U chemical sewer waste, 271-U compressor

Description: cooling water, 221-U chemical sewer waste, and 224-U process condensate.

Site Code: 216-U-17 Classification: Accepted

Site Names: 216-U-17, 216-U-17 Crib ReClassification:

Site Type:CribStart Date:1988Site Status:InactiveEnd Date:1994

Site The crib is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste The unit received 224-U process condensate. A neutralization system was placed into operation **Description:** before startup of this crib to preclude the discharge of process condensate outside the range of

2.0 to 12.5 pH.

Site Code: UPR-200-E-145 Classification: Accepted

Site Names: UPR-200-E-145, W049H Green Soil, VCP ReClassification:

Pipeline Leak

Site Type: Unplanned Release Start Date: 1993

Site Status: Inactive End Date:

Site The site currently is a flat, disturbed area, with no vegetation. The area is covered with sandy soil

Description: and some rocks and gravel. The release was identified in a pipeline excavation that was oriented

north to south. The north end of the excavation was located at a power pole with a blue air sample

cabinet.

Waste Type: Soil

Waste Contaminated soil reading 300,000 disintegrations per minute of beta/gamma was found in an **Description:** excavation, above a buried vitrified clay pipeline. The pipeline carried waste from the 216-A-8

Proportional Sample Pit #2 to the 216-A-34 crib. The contaminated soil read 300,000 disintegrations per minute with a GM/P-11 probe instrument. Sample results indicate the contamination was primarily due to uranium oxide from past practices on the Hanford site.

200-PW-5

Site Code: 216-B-11A&B Classification: Accepted

Site Names: 216-B-11A&B, 216-B-11 Crib, 242-B-1 ReClassification:

Crib, 216-B-11A & B, 216-B-11B

Site Type:French DrainStart Date:1951Site Status:InactiveEnd Date:1954

Site The cribs are located beneath a larger area of scraped contaminated soil from the UPR-200-E-144 stabilization, completed in 1992. The consolidated contaminated soil was covered with clean

backfill and reposted as Underground Radioactive Material. The crib consists of two wooden structures placed side by side. The crib locations are identified with light post and chain with

Cave-in Potential signs.

Waste Type: Process Effluent

Waste The site received process condensate from the 242-B Evaporator. The waste is low in salt and is

Description: neutral to basic.

Site Code: 216-B-50 Classification: Accepted

Site Names: 216-B-50, 216-BY-8 Crib, 216-BY-8 ReClassification:

Cavern

Site Type:CribStart Date:1965Site Status:InactiveEnd Date:1974

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received the waste storage tank intermediate level process condensate from the In Tank **Description:** Solidification (ITS) #1 unit in the 241-BY Tank Farm.

Since startup of the #1 ITS in March, 1965, approximately five and one-half million gallons of condensate containing about 120 beta curies of activity, including about 70 curies of cesium-137, have been routed to the 216-B-50 crib (as of April 1968). The crib was originally constructed along with seven others in the same location to receive scavenged tributyl phosphate (TBP) waste. The other seven were used for this purpose, but the crib site was taken out of service when a cobalt-60 and cesium-137 breakthrough occurred. The decision to use the 216-B-50 crib for ITS condensate was made about 8 or 9 years later when it was known that the groundwater activity levels were definitely decreasing. It was recognized that the crib had limited use. 216-B-50 crib has a bottom area of 83.6 square meters (900 square feet), and its capacity had been adequate for the 5-6 gallons per minute flow of condensate. Now that the capacity of #1 ITS has been doubled (Project ICE-618), it is doubtful that the crib will have sufficient capacity without a significant rise in the level of water in the crib. This increase of water level could drive the condensate through the highly contaminated zone under the other seven cribs (216-B-43 through 49) that are located 15 to 76 meters (50 to 250 feet) from the 216-B-50 crib. Flow data obtained from the monitoring wells showed that condensate sent to the 216-B-50 crib tended to migrate under the highly contaminated cribs. To avoid potential flooding of 216-B-50, 216-B-61 crib was proposed. The #2 ITS Unit, also located in the 241-BY Tank Farm used crib 216-B-57, which was designed for receiving only the condensate flow

from the #2 Unit. The 216-B-50 crib needed to be taken out of service because of its size limitations and because of the close proximity of the highly contaminated cribs (216-B-43 through 216-B-49) that had been used for scavenged TBP wastes. These seven cribs received over 400,000 curies of beta activity including about 13,000 and 4,000 curies of long lived strontium and cesium, respectively. The groundwater under these cribs still contains detectable concentrations of cesium-137 and cobalt-60 (April 1968).

Site Code: 216-B-57 Classification: Accepted

Site Names: 216-B-57, 216-B-57 Enclosed Trench, **ReClassification:**

Hanford Prototype Barrier

Site Type:CribStart Date:1968Site Status:InactiveEnd Date:1973

Site This crib was selected to be the site of the Hanford Prototype Barrier. The engineered barrier was

Description: constructed on top of the crib in 1994. The barrier is 105 meters (340 feet) long, 64 meters (210

feet) wide and 15 meters (49 feet) tall. It is posted Underground Radioactive Material.

Waste Type: Storage Tank

Waste The site received the waste storage tank condensate from the In Tank Solidification (ITS) #2

Description: Unit in 241-BY Tank Farm.

Site Code: 216-B-62 Classification: Accepted

Site Names: 216-B-62, 216-B-62 Enclosed Trench, 216- ReClassification:

B-62 Crib

Site Type:CribStart Date:1973Site Status:InactiveEnd Date:1991

Site The crib is surrounded with cement AC-540 markers and posted with Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste The site has received process condensate from the 221-B Building Separations Facilities. TPA

Description: milestone M-17-26 required all discharge to the Crib to be ceased by Sept. 1991.

Site Code: 216-C-6 Classification: Accepted

Site Names: 216-C-6, 241-CX Crib ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1964

Site The crib is covered with gravel and marked with cement posts on the four corners. It is posted

Description: with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received the process condensate from the 201-C Building and the 241-CX Vault floor

Description: drainage in the 241-CX area. The waste is acidic.

Site Code: 216-S-9 Classification: Accepted

Site Names: 216-S-9 ReClassification:

Site Type:CribStart Date:1965Site Status:InactiveEnd Date:1969

Site The unit is a gravel structure with a side slope of 1:1.5. Waste flowed into the unit through the **Description:** distribution system, which consists of 177 meters (581 feet) of 15-centimeter (6-inch) V.C.T.

perforated pipe in a U-shape, 4.6 meters (15 feet) by 89.9 meters (295 feet), and connected by 7.3 meters (24 feet) of 4.6-centimeter (3-inch) Schedule 10 pipe in a Y-shape. The entire distribution

system is 6.4 meters (21 feet) below grade.

Waste Type: Process Effluent

Waste The site received process condensate from the D-2 Receiver Tank in the 202-S Building. The

Description: waste is acidic.

Site Code: 216-S-21 Classification: Accepted

Site Names: 216-S-21, 216-SX-1, 216-SX-1 Cavern or ReClassification:

Crib

Site Type:CribStart Date:1954Site Status:InactiveEnd Date:1970

Site The site was interim stabilized in 1991 and is posted "Underground Radioactive Material." The

Description: site consists of one wooden crib box with two vent risers and one test well going through the

center of the box. This crib box sits in a gravel layer in the bottom of a square pit. The rest of the

pit is backfilled.

Waste Type: Process Effluent

Waste The site received 241-SX condensate from the condensers in the 401-SX Condenser Facility via

Description: the 241-SX-206 Tank. The waste is low in salt and is neutral to basic. The waste contained

sodium and ammonium nitrate.

Site Code: UPR-200-W-108 Classification: Accepted

Site Names: UPR-200-W-108, Line leak at 216-S-9 **ReClassification:**

Crib, UN-216-W-18, UN-200-W-108

Site Type: Unplanned Release Start Date: 1969
Site Status: Inactive End Date: 1969

Site The release site is posted as a "Surface Contamination Area". The excavation was filled after the

Description: work was completed.

Waste Type: Process Effluent

Waste Description:

The waste was REDOX process condensate from the D-2 Receiver Tank in the 202-S Building with beta and gamma contamination and dose rate readings of 40 rads/hour at the bottom of the

waste line.

Site Code: UPR-200-W-109

Classification: Accepted

Site Names:

UPR-200-W-109, Waste Line Leak near 218-W-9, UN-216-W-19, UN-200-W-109

ReClassification:

Site Type: Unplanned Release

Start Date: 1969

Site Status: Inactive

End Date: 1969

Site Description:

The release was a transfer line break that occurred within the east chain barricade of the 218-W-9 Burial Ground. The 218-W-9 Area was interim stabilized in 1991 with 46 to 61 centimeters (18 to 24 inches) of uncontaminated backfill. The release site was covered with soil and revegetated

along with 218-W-9.

Waste Type:

Process Effluent

Waste Description:

The waste was process condensate containing acidic unknown beta and gamma contamination. It came from the D-2 Receiver Tank in the 202-S Building. Dose rates of the liquid were 450

millirads/hour at the surface. As the water sank back into the ground, surface dose rates dropped

to 20 millirads/hour.

200-PW-6

Site Code: 231-W-151 Classification: Accepted

Site Names: 231-W-151, 231-W-151 Vault, 231-W-151- **ReClassification:**

001 (Tank), 231-W-151-002 (Tank), 231-W-151 Sump, 231-Z-151 Sump, IMUST, Inactive Miscellaneous Underground

Storage Tank

Site Type:Receiving VaultStart Date:1948Site Status:InactiveEnd Date:1974

The unit is a concrete vault partially underground with 3 steel risers and one vent structure protruding from holes in the top. The vault contains two tanks. It is posted with Contamination

Area/Radiation Area signs and Restricted Access Unsafe Structure, Confined Space and IMUST

signs.

Waste Type: Process Effluent

Waste The unit consists of a vault containing the two tanks, 231-W-151-001 and 231-W-151-002, installed to receive drainage from 75 floor drains in Building 231-Z. Floor drainage solids

settled, leaving sludge and sediment in the tanks. Plutonium finishing wastes or chemicals from building 231-Z may have been introduced to the two tanks. A water sample taken from 231-W-151-001 May 9, 1974 showed Cs137, Sr89, Sr90, and Uranium. 231-W-151-001 was reported to contain only ~0.001grams of plutonium then, and little or no ferrocyanides. A water sample taken from 231-W-151-002 May 9, 1974 showed cesium-137, strontium-89/strontium-90, uranium, plutonium-238, plutonium-239, plutonium-240, and americium-241. In summary, these results indicate a content of 228 grams of plutonium in the sludge in 231-W-151-002, and

less than 0.001 grams in the supernatant.

SubSites:

SubSite Code: 231-W-151:1

SubSite Name: 231-W-151:1, 231-W-151-001

Classification: Accepted

ReClassification:

Description: Tank 231-W-151-001 is located within the 231-W-151 Vault. It is a 15,140 liter (4000

gallon) stainless steel tank that received drainage from the 231-Z building floor drains. The drainage was routed to 231-W-151-002, which when filled, overflowed into 231-W-151-001. The solids would settle out into the tanks and the supernate was discharged to the 216-Z-7

crib.

Tank operations began in 1948 and were discontinued in 1974. The inlet lines to the tank have been blanked off. In 1974, a sample was taken that indicated 231-W-151-001 contained only 0.001 grams of plutonium. The tank contents were reported to be 5,413 liters (1430)

gallons) of supernate and no sludge.

SubSite Code: 231-W-151:2

SubSite Name: 231-W-151:2, 231-W-151-002

Classification: Accepted

ReClassification:

Description:

Tank 231-W-151-002 is located within the 231-W-151 Vault. It is a 3,596 liter (950 gallon) stainless steel tank that received drainage from the 231-Z building floor drains. The solids would settle out into the tanks and the supernate was discharged to the 216-Z-7 crib.

Tank operations began in 1948 and were discontinued in 1974. The inlet lines to the tank have been blanked off. In 1974, a sample was taken that indicated 231-W-151-002 contained 228 grams of plutonium in the sludge and less than 0.001 grams of plutonium in the supernate. The tank contents were reported to be 3,615 liters (955 gallons) of supernate and 45 liters (12 gallons) of sludge.

Site Code: 216-Z-4 Classification: Accepted

Site Names: 216-Z-4, 231-W-3 Pit, 231-W-3 Sump, 231- **ReClassification:**

W-3 Crib, 216-Z-3, 216-Z-4 Crib

Site Type:TrenchStart Date:1945Site Status:InactiveEnd Date:1945

Site The 216-Z-4 Trench is an inactive waste management unit. The unit was backfilled and

Description: deactivated in 1945. The original configuration was a large unlined excavation.

Waste Type: Process Effluent

Waste The site received the process and laboratory waste from the 231-Z Building. The waste was

Description: neutral to basic.

Site Code: 216-Z-5 Classification: Accepted

Site Names: 216-Z-5, 231-W Sumps, 231-W-1 & 2 Cribs ReClassification:

Site Type:CribStart Date:1945Site Status:InactiveEnd Date:1947

Site The 216-Z-5 Crib is an inactive waste management unit located below grade. The crib is oriented

Description: in a north-south configuration with a transfer pipe connecting to two wooden sump boxes. Each

box was placed at the bottom of a rectangular excavation. The two excavations were the

backfilled to grade.

Waste Type: Process Effluent

Waste The site received process waste from the 231-Z Building via the 231-W-151 Vault. An

Description: estimated 3,000 grams of plutonium was discharged from 231-Z to these cribs. The cribs were

plugged with sludge and abandoned. It is believed the plutonium is in the sludge or directly

beneath the crib area.

Site Code: 216-Z-6 Classification: Accepted

Site Names: 216-Z-6, 231-W-4 Crib, 231-Z-6, 216-W-4, ReClassification:

231-W Crib, 216-Z-4, 216-Z-6 & 6A Crib

Site Type:CribStart Date:1945Site Status:InactiveEnd Date:1945

Site The 216-Z-6 is a below grade, inactive waste management unit. The site consists of a rectangular

Description: wooden box set in the base of an excavation.

Waste Type: Process Effluent

Waste The site received process waste from the 231-Z Building via the 231-W-151 Sump Tank.

Description:

Site Code: 216-Z-8 Classification: Accepted

Site Names: 216-Z-8, 234-5 Recuplex French Drain, **ReClassification:**

216-Z-9, 216-Z-8 Crib

Site Type:French DrainStart Date:1955Site Status:InactiveEnd Date:1962

Site The french drain is constructed of two sections of 0.9-meter (3-foot) high standard clay tile **Description:** culverts, stacked vertically underground. The culverts are filled with gravel and rest on a 1.5-

meter (5-foot) diameter by 0.9-meter (3-foot) deep bed of gravel with a slope of 2.5:1. There is a 10-centimeter (4-inch) thick concrete top that is 2.4 meter (8 feet) below grade. The bottom of

the french drain is 5.57 meters (17 feet) below grade.

Waste Type: Process Effluent

Waste The site received overflow from the Recuplex Silica Tank (neutral to basic Recuplex waste). As **Description:** of June 30 1978 the calculated radionuclide content included 48.4 grams (0.1 pounds) of

plutonium. The adjacent well (#299-W15-202) shows a maximum of 4,400 picocuries/gram of plutonium-239 and 440 picocuries/gram of americium-241 near the bottom of the french drain

structure.

Site Code: 216-Z-10 Classification: Accepted

Site Names: 216-Z-10, 216-Z-2, 231-W Reverse Well, ReClassification:

231-W-151 Dry Well or Reverse Well, 231-

Z well

Site Type: Injection/Reverse Well Start Date: 1945

Site Status: Inactive End Date: 1945

Site This site is a reverse well that protrudes approximately 0.31 meters (1 foot) above grade. The

Description: protruding end is capped with a flange. The well casing is constructed of steel pipe.

Waste Type: Process Effluent

Waste The site received process and laboratory waste from the 231-Z Building, via the 231-W-151

Description: Sump. The transuranic contaminated process waste was discharged at a rate of 76 liters (20

gallons) per minute. HW-28471 states that the small diameter well became plugged with sludge

in June 1945. Approximately 988,000 liters (260,000 gallons) of liquid containing

approximately 50 grams of plutonium was discharged to this unit.

Site Code: 241-Z-8 Classification: Accepted

Site Names: 241-Z-8, 241-Z-TK-8, Silica Slurry Tank, ReClassification:

216-Z-8, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Settling TankStart Date:1955Site Status:InactiveEnd Date:1962

Site The tank is a horizontal cylindrical vessel located 1.8 meters (6 feet) below grade. The area **Description:** above the tank is surrounded by a light weight chain barricade marked "Caution Underground"

Radioactive Material" and IMUST signs. Inside the barricade on the north end are two capped

10 centimeters (4 inches) steel vent pipes.

Waste Type: Sludge

Waste The tank was used as a solids settling tank for backflushes of the feed filter in the Recuplex.

Description: Silica gel was used as a settling agent on the dissolved solids. The solids and the silica gel were

then flushed to this unit with nitric acid. In July 1959, records indicate the tank was filled to capacity 58,428 liters (15,435 gallons). No records were found to indicate the tank was pumped between 1959 and 1962. In 1974, a total waste volume of 30,850 liters (8,150 gallons) was reported. A total of 27,580 liters (7,285 gallons) has not been accounted for in historical records. The tank measures 2.4 meters (8 feet) diameter. by 12.2 meters (40 feet) length, constructed of 0.79 centimeters (5/16 inch) steel or wrought iron pate, buried horizontally about 1.8 meters (6 feet) below grade. There are two blanked inlet pipes on the west end and on overflow pipe on the east end of the tank, all three are 15 centimeters (6 inches) below tank top.

In the east half of the top centerline of the tank, there are two 10 centimeters (4 inches) vent risers that extend above grade, a 0.3 meters (1 foot) diameter pump access opening, and a 0.6

meter (2 feet) diameter manhole; both bolted over.

Site Code: UPR-200-W-130 Classification: Accepted

Site Names: UPR-200-W-130, Line Leak at 231-W-151 ReClassification:

Sump, UN-200-W-130

Site Type:Unplanned ReleaseStart Date:1967Site Status:InactiveEnd Date:1967

Site The release site is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The soil had alpha readings up to 40,000 disintegrations per minute, with dose rates of 100

Description: millirem/hour of beta and 50 millirem/hour of gamma.

200-RO-1

Site Code: UPR-200-W-124 Classification: Accepted

Site Names: UPR-200-W-124, Dike Break at the **ReClassification:**

REDOX Pond, UN-200-W-124

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The historical documentation for this release is vague. It most likely occurred at the 216-S-17

Description: Pond. The Sketch G in HW-60807 points to 216-S-17 but the location description text in HW-

60807 could also indicate the 216-S-19 Pond.

Waste Type: Process Effluent

Waste The waste was contaminated cooling water from the process tanks at the 202-S Building.

Description:

200-RO-2

Site Code: 203-S & 205-S Classification: Accepted

Site Names: 203-S & 205-S, 203-S/204-S/205-S ReClassification:

Stabilized Area, 203-S Uranyl Nitrate Hexahydrate Tank Farm, 204-S Tank Farm & Pumphouse, 205-S Process Vault & Chemical Makeup Building, 205-S Uranyl Nitrate Hexahydrate Processing Facility

Site Type:Process Unit/PlantStart Date:1953Site Status:InactiveEnd Date:1965

Site The aboveground tanks and features of these facilities were removed in 1983. The area was

Description: backfilled and surface stabilized. The site is currently a posted Underground Radioactive

Material area.

Waste Type: Process Effluent

Waste Waste processed and stored in this area included contaminated UNH from REDOX and PUREX, Thorium Nitrate from PUREX, 100-N Reactor decontamination waste and 300 Area

Laboratory waste. Radiological contaminants may be present in and around the remaining contaminated structures (cement basins and piping) that were not removed in the 1983

stabilization efforts.

Site Code: 276-S Classification: Accepted

Site Names: 276-S, 276-S Solvent Handling Facility, **ReClassification:**

276-S Solvent Facility

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1967

Site The 276-S Building is a concrete and steel building, with transite siding on the portions of the **Description:** building constructed of steel frame. The floor of the building is below grade, making up the

processing area. Tanks and pumps make up most of the process equipment in the building.

Waste Type: Chemicals

Waste This unit contains contaminated surfaces inside pumps, pits, and tanks. No inventory has been

Description: determined. Hexone contamination may also be present in building systems.

Site Code: 296-S-12 Classification: Accepted

Site Names: 296-S-12, 296-S-12 Stacks ReClassification:

Site Type:StackStart Date:Site Status:InactiveEnd Date:

Site There are two units, each 53 centimeters (21 inches) square and 3.2 meters (10.5 feet) high

Description:

Waste Type: Process Effluent

Waste The unit received exhaust air from the 276-S Operating Gallery. **Description:**

Site Code: 2904-SA Classification: Accepted

Site Names: 2904-SA, 2904-SA Cooling Water Sampler **ReClassification:**

Building, 2904-SA Sample Building

Site Type:Process Unit/PlantStart Date:1956Site Status:InactiveEnd Date:1976

Site The 2904-SA Sample Building is a prefabricated metal structure resting on a concrete

Description: foundation. It is located over the southern portion of the 2904-S-170 Control Structure. Process

equipment within the building includes a pump, a stainless steel tank (below grade), and a sample riser that extends through the floor of the building. The exterior of the building is posted with

Contamination Area and Danger-Restricted Access signs.

Waste Type: Process Effluent

Waste This unit contains trace amounts of low-level radioactive surface contamination derived from the

Description: process effluents sampled in this building.

Site Code: UPR-200-W-20 Classification: Accepted

Site Names: UPR-200-W-20, UN-200-W-20, Spread of ReClassification:

Contamination from a Diversion Box

Site Type: Unplanned Release Start Date: 1953

Site Status: Inactive End Date:

Site The unplanned release is no longer marked or posted.

Description:

Waste Type: Process Effluent

Waste Specks from the open diversion box caused an area around the diversion box to be contaminated.

Description:

200-RO-3

202-S Accepted **Site Code: Classification:**

202-S, 202-S REDOX, S Plant **ReClassification: Site Names:**

Site Type: Process Unit/Plant **Start Date:** 1952 1967 **Site Status:** Inactive **End Date:**

The 202-S Building is one of the five canyon buildings. The inactive waste management unit is a Site **Description:** large reinforced concrete structure. The canyon's processing areas and equipment are contained

in small rooms called cells. The nine cells are arranged in rows that are spanned by a large crane. Each cell is topped by a thick, concrete cover. This cover is removed by the crane, allowing access to the underlying cells. The gallery above the cell cover is the same height as the cell,

allowing process equipment to be manipulated during maintenance and operations.

Waste Type: Equipment

Waste The unit contains solid radioactive waste.

Description:

SubSites:

SubSite Code: 202-S:1

SubSite Name: 202-S:1, 211-S Tank Farm

Classification: Accepted

ReClassification:

Description: The 211-S Tank Farm is located west of the 202-S canyon building. It was a liquid chemical

> storage area. The tank farm consists of eight above ground steel storage tanks ranging from 16,430 liters (4300 gallons) to 186,200 liters (49,000 gallons). The tanks held nitric nonahydrate, nitric acid, sodium dichromate and sodium hydroxide. All of the tanks, pumps and piping were flushed and emptied when the REDOX facility was deactivated. The area had been posted as a Contamination Area due to migration of contamination from nearby contaminated processes and Surface Contamination Areas. The 211-S Tank Farm was covered with a minimum of 15.24 centimeters of clean gravel in November 2002. The area

was downposted as an Underground Radioactive Material Area.

Site Code: 219-S-101 Classification: Accepted

Site Names: 219-S-101, 219-S-TK-101, TK-101 Crib **ReClassification:**

Waste Receiver, 219-S, TK-101 Receiver

Tank

Site Type: Storage Tank **Start Date:** 1951

Site Status: Active **End Date:**

The 219-S-101 Tank is a monitored stainless steel receiver tank resting in a below grade concrete Site

Description: vault at the 219-S Waste Handling Facility.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from the 222-S Analytical Laboratory processes. The waste is transferred to Tank 219-S-TK-102 for treatment with sodium hydroxide and sodium **Description:**

nitrate.

Classification: Site Code: 219-S-102 Accepted

Site Names: 219-S-102, 219-S-TK-102, 219-S Storage **ReClassification:**

Tank 102, 219-S Primary Treatment Tank

TK-102

Neutralization Tank **Start Date:** 1951 **Site Type:**

Site Status: Active **End Date:**

The 219-S-102 Tank is a monitored stainless steel treatment and transfer tank resting in a below Site

grade concrete vault at the 219-S Waste Handling Facility. **Description:**

Waste Type: Process Effluent

Waste The unit receives high activity mixed waste from the 222-S Laboratory processes. The waste is **Description:**

normally transferred from Tanks 101 and 104 for treatment. The waste is treated with sodium hydroxide to a pH greater than 12 and sodium nitrite to a concentration greater than 600 parts

per million.

Site Code: 219-S-103 **Classification:** Accepted

Site Names: 219-S-103, 219-S-TK-103, 219-S Storage **ReClassification:**

Tank 103, 219-S Backup Treatment Tank

TK-103, 219-S-104, TK-104

Storage Tank 1951 **Site Type: Start Date:**

Site Status: Active **End Date:**

This site includes two tanks, Tank 103 and its replacement, Tank 104. Tank 104 began service in Site

1996. Tank 103 was removed from service, blanked off, and left in place in 1999. They are both **Description:**

monitored stainless steel treatment and transfer tanks resting in a below grade concrete vault at the

219-S Waste Handling Facility.

Waste Type: Process Effluent

Waste Tank 104 receives liquid mixed waste from the 222-S Analytical Laboratory processes. The

waste is transferred to Tank 219-S-TK-102 for treatment with sodium hydroxide and sodium **Description:**

nitrite. Tank 103 used to receive high activity liquid mixed waste, that was them transferred to

Tank 219-S-102 for treatment before being sent to the double-shell tank farms for storage.

233-S **Classification:** Site Code: Accepted

Site Names: 233-S, 233-S Plutonium Concentration **ReClassification:**

Facility

Start Date: Site Type: Process Unit/Plant 1952 **End Date:** 1967 **Site Status:** Inactive

Site The 233-S Plutonium Concentration Facility was an inactive (retired) limited access facility. The

building was a reinforced concrete and structural steel assembly with corrugated steel and **Description:**

concrete walls. The building had eight rooms, an airlock, and a highbay area. These rooms are divided into two zones by a vertical partition of transparent plastic and structural steel. The two zones include a process area and a process viewing area. The building was demolished in 2003. Waste Type: Asbestos (non-friable)

Waste Piping insulation, wire insulation, and ventilation components may be insulated with asbestos

Description: containing materials. Transite is used on certain building components.

Waste Type: Chemicals

Waste Chemical and radiological contaminants may still be present as residual materials in building

Description: systems.

Waste Type: Equipment

Waste Process equipment, systems, and building surfaces may have fixed and removable contamination

Description: as a result of processing and UPR-200-W-57.

Site Code: 291-S Classification: Rejected (Proposed)

Site Names: 291-S, 291-S Fan Control Building, 291-S ReClassification:

Fan House, 291-S Fan and Filter Building

Site Type: Process Unit/Plant Start Date: 1952

Site Status: Active End Date:

Site The fan house is an above ground concrete structure with outside dimensions of 4.2 meters by 6 **Description:** meters (14 feet by 20 feet) and contains the blowers for the REDOX main ventilation system.

Waste Type: Equipment

Waste The unit received exhaust air from the 202-S Process Building. The fans have very low levels of

Description: radiological contamination.

Site Code: 291-S-1 Classification: Rejected (Proposed)

Site Names: 291-S-1, 291-S-1 Stack, REDOX Process ReClassification:

and Canyon Exhaust

Site Type: Stack Start Date: 1952

Site Status: Active End Date:

Site The unit is a double-shell structure. The outer shell is made of reinforced concrete and the inner

Description: shell is constructed of acid-resistant brick and mortar.

Waste Type: Process Effluent

Waste The stack exhausts filtered air from the 202-S Process Building.

Description:

Site Code: 292-S Classification: Accepted

Site Names: 292-S, 292-S Fan and Filter Building **ReClassification:**

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1967

The unit is a concrete building, 3.4 meters (11 feet) high. Most of the concrete is 25.4 centimeters

Description: (10 inches) thick. An exhaust jet is located beneath the unit. The structure contains a 1.5-meter

(10 inches) thick. An exhaust jet is located beneath the unit. The structure contains a 1.5-meter (5-foot) diameter by 2.3-meter (7.5-foot) high tank, 305 meters (1,000 feet) of 5.1-centimeter (2-inch) diameter tubing, and 91.5 meters (300 feet) of larger pipe up to 15.2 centimeters (6 inches)

in diameter.

Waste Type: Process Effluent

Waste The unit contains radioactively contaminated surfaces on tanks, piping, and concrete

Description: (preliminary estimate is 4 curies beta).

Site Code: 293-S Classification: Accepted

Site Names: 293-S, 293-S Offgas Treatment Facility, **ReClassification:**

293-S Off Gas Treatment, 293-S Off-Gas

Treatment and Recovery

Site Type:Process Unit/PlantStart Date:1958Site Status:InactiveEnd Date:1967

Site The building extends 3.7 meters (12 feet) below grade to 9 meters (30 feet) above grade and is constructed of reinforced concrete. The main floor houses the absorption towers with a pipe

constructed of reinforced concrete. The main floor houses the absorption towers with a pipe valve pit in the basement. A corrugated metal lean-to, 2.6 meters (8.5 feet) by 8.5 meters (28 feet), is attached to the south wall. It houses the control room and Special Work Permit (SWP) with its concrete basement housing control piping. Underground acid storage, 4.3 meters (14 feet) by 4.0 meters (13 feet), is provided adjacent to the main building's west side. Also, ventilation supply equipment is present above ground adjacent to the south end of the lean-to

structure.

Waste Type: Process Effluent

Waste This unit and structure are radioactively contaminated.

Description:

Site Code: 296-S-1 Classification: Accepted

Site Names: 296-S-1, 296-S-1 Stack ReClassification:

Site Type:StackStart Date:1950Site Status:InactiveEnd Date:1976

Site The unit is constructed of metal, and it extends from grade level to 1.8 meters (6 feet) above the

Description: roof.

Waste Type: Process Effluent

Waste The unit contains surface radioactive contamination, exact amount unknown (1,000 **Description:** counts/minute beta/gamma direct). The unit discharged filtered air from the south sample

gallery and sample hoods of 202-S.

Site Code: 296-S-2 Classification: Rejected (Proposed)

Site Names: 296-S-2, REDOX North Sample Gallery, **ReClassification:**

Hoods Ventilation and PR Cage, 296-S-2

Stack

Stack **Start Date:** Site Type: **Site Status:** Active **End Date:**

The unit is constructed of metal and extends from the sample gallery level to above the roof. The Site

fan and motor are in place. The fan and base are on a contaminated surface. **Description:**

Waste Type: Process Effluent

Waste The unit contains an unknown amount of surface radioactive contamination. The unit discharged filtered air from the north sample gallery and sample hoods of 202-S. **Description:**

Site Code: 296-S-4 **Classification:** Rejected (Proposed)

Site Names: 296-S-4, REDOX Decontamination Room, **ReClassification:**

> Regulated Shop, Regulated Tool Room, Low-Level Decontamination Sink and Special Work Permit Lobby Vent

Site Type: Stack **Start Date: Site Status:** Active **End Date:**

The unit is constructed of metal, and extends from grade level to 1.8 meters (6 feet) above the Site **Description:** roof. The fan and motor are in place. The fan and stack base are in a surface contaminated area.

Waste Type: Process Effluent

The unit contains trace amounts of surface radioactive contamination. The unit discharged Waste filtered air from the decontamination room and regulated shop and unfiltered air from the **Description:**

regulated tool room low-level decontamination sink and Special Work Permit (SWP) lobby.

Site Code: 296-S-6 **Classification:** Rejected (Proposed)

Site Names: 296-S-6, 296-S-6 Stack, REDOX Silo **ReClassification:**

Ventilation

Site Type: Stack **Start Date:** Active **End Date: Site Status:**

The unit is constructed of metal, and it extends from the fan base in the feed tank area to 3.5 Site

meters (11.5 feet) above the roof. **Description:**

Process Effluent Waste Type:

The unit contains trace amounts of surface radioactive contamination. The unit discharged Waste

unfiltered air from the silo gallery, organic feed tank, and sample elevator. **Description:**

Site Code: 296-S-7 **Classification:** Rejected (Proposed)

Site Names: 296-S-7, 296-S-7E, 296-S-7W, REDOX **ReClassification:**

Product Building (233-S) Ventilation, Dual

Stacks, 296-S-7 East and West Stacks

Stack **Start Date:** Site Type:

Site Status: Active **End Date:**

The unit consists of two units, constructed of metal, extending from the fan base to above roof Site **Description:**

level. The unit includes a 6 meters (20 feet) intake duct and 2 electric drive fans. The systems are

run one at a time and are alternated weekly.

Waste Type: Process Effluent

The units contain an unknown amount of surface radioactive contamination. Only trace amounts Waste of contamination are expected. The unit discharged air from 233-S. This unit did not exhaust **Description:**

filtered air in 1988.

Site Code: 296-S-13 Classification: Accepted

Site Names: 296-S-13, 222-S Stack **ReClassification:**

Start Date: 1951 Site Type: Stack 1978 **Site Status:** Inactive **End Date:**

Site The stack originates on the second floor of 222-S and is approximately 2 meters (7 feet) in

diameter by 16 meters (52 feet) tall. **Description:**

Process Effluent Waste Type:

Waste **Description:**

Site Code: 296-S-16 **Classification:** Accepted

Site Names: 296-S-16, 219-S Stack **ReClassification:**

Site Type: Start Date: 1951 Stack

Site Status: End Date: Active

Site The stack is approximately 10 centimeters (4 inches) in diameter by 2.7 meters (7 feet) high.

Description:

Waste Type: Process Effluent

Waste

Description:

Site Code: 296-S-21 **Classification:** Accepted

ReClassification: Site Names: 296-S-21, 222-S Stack

Start Date: 1978 Site Type: Stack

End Date: Site Status: Active

The stack is approximately 2 meters (6.5 feet) in diameter by 11.6 meters (38 feet) tall. Site

Description:

Waste Type: Process Effluent

Waste **Description:** Site Code: 2711-S Classification: Accepted

Site Names: 2711-S, 2711-S Stack Monitoring Building **ReClassification:**

Site Type: Process Unit/Plant Start Date: 1959

Site Status: Inactive End Date:

Site The 2711-S Building is an isolated, inactive wooden structure. The structure is old and of

Description: questionable integrity.

Waste Type: Equipment

Waste The building stores office furniture and performance monitoring equipment which may be

Description: radiologically contaminated.

Waste Type: Equipment

Waste The building may store lead shielding. According to WHC-SP-0331, Revision 1, this lead was

Description: scheduled for removal.

Site Code: 2718-S Classification: Accepted

Site Names: 2718-S, 2718-S Sand Filter Monitor, 2718- **ReClassification:**

S Sand Filter Sampler, 2718-S Filter

Monitoring Building

Site Type: Process Unit/Plant Start Date: 1952

Site Status: Active End Date:

Site The 2718-S Building is an active wooden building in fair to poor condition. Portions of the

Description: building are of questionable integrity.

Waste Type: Equipment

Waste The building stores office furniture and performance monitoring equipment which may be

Description: radiologically contaminated.

Waste Type: Equipment

Waste The building may store lead shielding. According to WHC-SP-0331, Revision 1, this lead was

Description: scheduled for removal.

Site Code: 2727-S Classification: Accepted

Site Names: 2727-S, 2727-S Nonradioactive Dangerous ReClassification: Closed Out (6/27/1995)

Waste Storage Facility, 2727-S NRDWS

Facility

Site Type:StorageStart Date:1983Site Status:InactiveEnd Date:1995

Site The 2727-S Nonradioactive Dangerous Waste Storage Facility provided container storage for nonradioactive dangerous and extremely hazardous wastes generated in research and development

laboratories, process operations, and maintenance and transportation functions through the Hanford Site. All waste containers have been removed from the facility and sent to an offsite RCRA Treatment, Storage, and/or Disposal (TSD) site and the building and its surrounding concrete pad have been demolished and removed. Some piles of dirt and asphalt rubble that appear to be left over from cleanup operations remain. The metal building measured 6.1 by 12.2 meters (20 by 40 feet) and was set over two main cubed concrete cells which segregated the oxidizing waste from corrosive, organic, ignitable and other waste types. The floor of the building was part of a concrete storage pad which extends beyond the building in all four directions. The concrete pad measured approximately 19.8 by 32.0 meters (65 by 105 feet). Waste was stored both inside the building and outside on the concrete pad on pallets. During a very short operating period, waste drums were also stored on pallets on the soil surrounding the pad.

Waste Type: Chemicals

Waste The unit was used for storage of nonradioactive dangerous and extremely hazardous wastes

Description: generated on the Hanford Site. The wastes consisted of listed wastes, wastes from nonspecific

sources, characteristic wastes, and state-only wastes.

Waste Type: Demolition and Inert Waste

Waste Piles of dirt and asphalt rubble that appear to be left over from cleanup operations still remain at

Description: the site.

Site Code: 233-SA Classification: Rejected (Proposed)

Site Names: 233-SA, 233-SA Exhaust Filter Building **ReClassification:**

Site Type: Process Unit/Plant Start Date: 1967

Site Status: Active End Date:

Site The 233-SA Exhaust Filter Building is a one-story reinforced concrete structure. The building

Description: houses two banks of double high-efficiency particulate air (HEPA) filters. Each filter bank has its

own exhaust fan, stack, and monitoring instrumentation.

Waste Type: Chemicals

Waste The system contains process equipment contaminated with plutonium and americium derived

Description: from 233-S Building operations.

Site Code: 222-SD Classification: Accepted

Site Names: 222-SD, 222 SD, 222-S DMWSA, 222-S ReClassification:

TSD Dangerous and Mixed Waste Storage

Area

Site Type: Storage Start Date: 1979

Site Status: Active End Date:

The 222-S Dangerous Waste and Mixed Waste Storage Area (DMWSA) is a permitted treatment,

Description: Storage, and Disposal (TSD) area. It consists of two storage buildings (HS-0082 and HS-0083).

The storage buildings are self-contained units with fire suppression and air conditioning, and are equipped with secondary containment. The site also includes portions of the concrete pad, which was previously used for the connex boxes in the DMWSA. The units and pad will be removed at

closure under the Part B permit.

Waste Type: Chemicals

Waste Wastes generated from 222-S Analytical and 222-SA Standards Laboratories are stored in the

Description: unit. This consists of dangerous and mixed waste.

Site Code: 200-W-43 Classification: Accepted

Site Names: 200-W-43, 291-S Stack Sand Filter ReClassification:

Site Type: Sand Filter Start Date: 1952

Site Status: Active End Date:

Site The 291-S Stack Sand Filter is a below grade concrete structure containing seven layers of sand **Description:** and gravel. The walls and roof are 0.3 meters (1 foot) thick. The roof is visible above grade and

is covered with tar and gravel. The sand filter is outside dimensions are 26 by 26 meters (85 by

85 feet) with a depth of 4 meters (12.5 feet).

Waste Type: Soil

Waste Description:

Seven layers of sand and gravel filter radioactive contaminants out of the ventilation effluent prior to being released through the 291-S Stack. The sand filter has a 99.8 % efficiency. The sand filter was grossly contaminated with fission products and transuranics (TRU). Some of the short-lived radionucides have decayed since the shutdown of the REDOX operation.

Site Code: 200-W-69 Classification: Accepted

Site Names: 200-W-69, 222-S Laboratory Complex ReClassification:

Site Type: Laboratory Start Date: 1951

Site Status: Active End Date:

Site Description:

The 222-S Laboratory Complex is made up of the following components, several of which have separate W1DS entries (such as the components of the Treatment, Storage, and Disposal (TSD) facility):

- The 222-S Analytical Laboratory
- The 222-S Dangerous and Mixed Waste Storage Area (DMWSA), a storage unit
- The 219-S Waste Handling Facility, which contains the 219-S-101, 102, 103, and 104 storage tanks,
- The 222-SA Standards Laboratory,
- The 296-S-21 (active), 219-S-16 (active), 296-S-23 (active), and 296-S-13 (inactive) Stacks.

The 222-S Complex buildings were constructed in 1950 and 1951 to provide analytical chemistry services for the Reduction-Oxidation (REDOX) Plant. Currently, the 222-S Complex supports a large array of facilities and programs on the Hanford Site with analytical chemistry services.

The 222-S Laboratory is a two-story building in the southeast corner of the 200 West Area. The first floor is divided into three general areas. The west end holds the lunchroom, offices, and locker rooms, which are maintained free of radioactive and dangerous materials. The central section contains laboratories and service areas for work with radioactive and/or dangerous materials. Off the north side of the central section, on the outside of the building, is the 222-S Dangerous and Mixed Waste Storage Area. The east end, also called the multi-curie section, contains laboratories, hot cells, and service areas for work with radioactive samples. All first floor

sinks, hood drains, drinking water fountains, equipment cooling water, and steam condensate from radioactive areas drain to the 207-SL Retention Basin. The basins are a non-radioactive, non-hazardous facility. Mixed waste effluents drain to the 219-S Waste Handling Facility.

The second floor of the 222-S Laboratory contains the ventilation supply fans, supply and exhaust ductwork, ventilation system operation and control room, and storage areas. All floor drains, steam condensate overflow drains and the demineralized water system drains empty into the 207-SL Retention Basins.

The 222-S basement contains service piping, vacuum pumps, the counting room areas, an instrument maintenance shop, and a scanning electron microscope. Effluents from the cold tunnel sumps are discharged to the 207-SL Retention Basins and effluents from the hot tunnel sumps discharge to the 219-S Waste Handling Facility.

The supply water for the 222-S Laboratory consists of raw and sanitary water and steam. The raw water is primarily used in the first floor fire sprinkler system, and is less than 1 percent of the waste streams that discharge to the 207-SL Retention Basins. Sanitary water is used for all the other fire sprinkler systems, lab sinks, and hot cells. The sanitary water is estimated to contribute about 85 percent of the waste stream to the 207-SL Retention Basins, and steam condensate is the remaining approximately 15 percent.

The 222-S Dangerous and Mixed Waste Storage Area is part of the 222-S Laboratory Complex TSD, number TS-2-I, and WIDS site code 222-SD. It is located on the north side of the 222-S Laboratory building. Also part of the TSD are Room 2B (site 200-W-76), Room 4E, and the 219-S Storage Tanks (WIDS codes 219-S-101, 219-S-102, and 219-S-103, which includes tank 104).

The 219-S Waste Handling Facility, off the northeast side of the 222-S Laboratory Building, receives liquid mixed waste through hot disposal sinks in the 222-S Laboratory. The waste flows from sink and hot cell drains through all-welded, corrosion-resistant piping to corrosion-resistant tanks located in a below-ground concrete vault in the 219-S facility. The underground portions of the piping are double-encased stainless steel with leak detection to ensure containment and notification if a leak should occur. Pipe connections to the tanks are above maximum liquid levels to avoid potential leaks. The area above the vault is covered with a permanent enclosure and the operating gallery, located north of the vault, contains instrumentation and controls. Adjacent to the operating gallery is the sample gallery which contains a hood that is used for sample analysis during waste transfers. Wastes sent to tanks 101 and 104 are transferred to tank 102, which is a transfer point to the appropriate storage tank in the Double-Shell Tank System. After treatment in tank 102, the waste is transferred through a double encased fiberglass line to Tank Farms via the 244-S Double Contained Receiver Tank (DCRT). Overflows from tanks 101 and 102 are collected in sump 7; overflows from tank 104 are collected in sump 9; intrusion liquids in Cell B are collected in sump 6; and leaks in the Operating Gallery are collected in sump 8.

The 222-SA Standards Laboratory is a five-wide trailer southeast of the 222-S Laboratory. The 222-SA Standards Laboratory prepares non-radioactive standards for the 222-S Laboratory and other analytical laboratories and is also used for non-radioactive development work. Packaged waste generated from the 222-SA Standards Laboratory is non-radioactive, non-dangerous waste, and is accumulated in satellite areas before shipment to the Central Waste Complex. Laboratory sink drains in 222-SA are transferred to the 207-SL Retention Basins.

The 296-S-21 and 296-S-16 Stacks handle both radioactive and non-radioactive emissions. The 296-S-21 Stack exhausts emissions from the 222-S Laboratory after passing through HEPA filtration. The 296-S-16 Stack exhausts emissions from tanks 101, 102, and 104 in the 219-S Waste Handling Facility after passing through a de-entrainment filter and HEPA filter. Both the 296-S-21 and 296-S-16 stacks are record sampled for periodic confirmatory measurements. The

296-S-23 stack exhausts emissions from the 219-S Sample Gallery Hood. It is operated intermittently during waste transfers and the periodic confirmatory measurement consists of a biannual non-destructive assay (NDA) of the HEPA filter.

Waste Type: Chemicals

Waste Description:

The 219-S Waste Handling Facility receives low-level aqueous mixed waste generated by the 222-S Analytical Laboratory, and is either intermediate-or high-activity waste. The waste is designated as dangerous because of the characteristic of corrosivity. Liquid organic waste is not accepted in the 219-S Waste Handling Facility.

Chemicals from the 222-S Analytical Laboratory are outdated or off-specification and are both liquid and solid.

Nonradioactive dangerous waste includes chemicals from the 222-SA Standards Laboratory and nonradioactive off-specification chemicals from the 222-S Analytical Laboratory. This waste is regulated as dangerous waste because individual waste chemical characteristics can include: solid or liquid; reactive with water; ignitable; reactive to form toxic gases; oxidizer; cyanide or sulfide bearing; corrosive; and toxic.

Liquid organic waste contains both nonradioactive and radioactive organic components, and results from organic analyses of volatile, semivolatile, pesticide, and polychlorinated biphenyl compounds during daily laboratory operations.

Occasional waste includes mixed and nonradioactive dangerous waste generated during sample analysis such as rags, paper towels, and contaminated gloves; waste oil generated from equipment maintenance; and mercury-contaminated materials such as bulbs and thermometers.

Returned samples come from off-site laboratories. The unused portions of analyzed samples are returned to the generator (the Hanford Site)

Site Code: 200-W-76 Classification: Accepted

Site Names: 200-W-76, Room 2B 222-S Laboratory **ReClassification:**

TSD

Site Type: Storage Start Date: 1951

Site Status: Active End Date:

Site The north end of Room 2B in the 222-S Laboratory is partitioned off as a Treatment, Storage, and

Description: Disposal (TSD) area using a locked accordion style gate to prevent unauthorized access.

Waste Type: Chemicals

Waste

Description:

200-RO-4

Site Code: 216-S-3 Classification: Accepted

Site Names: 216-S-3, 216-S-5, 216-S-3 Crib ReClassification:

Site Type:CribStart Date:1953Site Status:InactiveEnd Date:1956

Site The unit consists of two open bottomed crib boxes 3.1 meters (10 feet) by 3.1 meters (10 feet) **Description:** made of timbers. The two crib boxes are connected in series 15 meters (50 feet) apart, with

overflow from one box into the other via a pipe. These boxes are set into a gravel layer in the bottom of a trench. The trench was the backfilled. Each box contains two flanged riser pipes

extending from the top of the box.

Waste Type: Process Effluent

Waste The site received condensate from condensers on the 241-S-101 and 241-S-104 Tanks in the **Description:** 241-S Tank Farm. The waste is low in salt and is neutral to basic. The inorganics at the site

consist of nitrate, sodium, sodium dichromate, sodium hydroxide, sodium aluminate, and ammonium nitrate. The Reduction Oxidation (REDOX) Radiation Monitoring Report for September 1953 states that the condensate diverted to this crib was sampled. The analysis

indicated 95% of the activity was due to zirconium-niobium.

Site Code: 216-S-15 Classification: Accepted

Site Names: 216-S-15, 216-S-2, 241-S-110 Pond, 110-S **ReClassification:**

Tank Overflow Pond, UN-216-W-3

Site Type:PondStart Date:1951Site Status:InactiveEnd Date:1952

Site This site consists of a pond that was deactivated by removing the above-ground piping and

Description: backfilling it with clean soil.

Waste Type: Process Effluent

Waste The site received condenser spray cooling water from the 241-S-110 Tank. The waste was low

Description: in salt, neutral to basic, and contained nitrates.

Site Code: 241-S-A Classification: Accepted

Site Names: 241-S-A, 241-S-A Valve Pit, 241-S-A ReClassification:

Diversion Box

Site Type: Valve Pit Start Date: 1952

Site Status: Inactive End Date:

Site This unit is a rectangular concrete structure used to divert waste flow to the proper destination, Valve handles extend through and above a concrete cover block on the 241-S-A Valve Pit.

Waste Type: Process Effluent

Waste Description:

The unit transports waste solutions from processing and decontamination operations. Quantities of waste are variable according to specific plant operations. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-S-B Classification: Accepted

Site Names: 241-S-B, 241-S-B Valve Pit, 241-S-B ReClassification:

Diversion Box

Site Type: Valve Pit Start Date: 1952

Site Status: Inactive End Date:

This unit is a rectangular concrete structure used to divert waste flow to the proper destination.

Valve handles extend through and above a concrete cover block on the 241-S-B Valve Pit.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities **Description:** of waste are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-S-C Classification: Accepted

Site Names: 241-S-C, 241-S-C Valve Pit, 241-S-C ReClassification:

Diversion Box

Site Type: Valve Pit Start Date: 1952

Site Status: Inactive End Date:

Site This unit is a rectangular concrete structure used to divert waste flow to the proper destination.

Description: Valve handles extend through and above a concrete cover block on the 241-S-C Valve Pit.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: of waste are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-S-D Classification: Accepted

Site Names: 241-S-D, 241-S-D Valve Pit, 241-S-D ReClassification:

Diversion Box

Site Type: Valve Pit Start Date: 1952

Site Status: Inactive End Date:

Site This unit is a rectangular concrete structure used to divert waste flow to the proper destination.

Valve handles extend through and above a concrete cover block on the 241-S-D Valve Pit.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities **Description:** of waste are variable according to specific plant operation. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-S-101 Classification: Accepted

Site Names: 241-S-101, 241-S-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1980

Site This unit is a second generation single-shell storage tank. Tank 241-S-101 is the first tank of a **Description:** three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

ption: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-S-101 included: REDOX high-level wastes, REDOX coating **Description:** waste, supernatant containing Pacific Northwest Laboratory waste, coating waste, PUREX low-

level waste, laboratory waste, B Plant high-level waste, terminal liquor and evaporator bottoms, partial neutralization feed, N Reactor waste, ion exchange waste, and double-shell slurry feed

from 241-U, 241-S and 241-SX Tank Farms.

Site Code: 241-S-102 Classification: Accepted

Site Names: 241-S-102, 241-S-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1980

Site This unit is a second generation single-shell storage tank. Tank 241-S-102 is the second tank of a

Description: three-tank cascade series. This tank is concrete reinforced, cylindrical, and dome-roofed with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-S-102 include: evaporator bottoms, REDOX high-level waste,

Description: noncomplexed waste, double-shell slurry feed, and partial neutralization feed from 241-S, 241-

SX, 241-SY, and 241-U Tank Farms.

Site Code: 241-S-103 Classification: Accepted

Site Names: 241-S-103, 241-S-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1980

Site This unit is a second generation single-shell storage tank. Tank 241-S-103 is the third tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Wast Description: wast

Waste transferred to Tank 241-S-103 included REDOX high-level waste, REDOX coating waste, evaporator bottoms, noncomplexed waste, partial neutralization feed, and double-shell

slurry feed from 241-S, 241-SX, 241-SY, and 241-U Tank Farms.

Site Code: 241-S-104

Classification: Accepted

Site Names: 241-S-104, 241-S-TK-104

ReClassification:

1968

Site Type: Single-Shell Tank

Start Date: 1953

Site Status: Inactive

End Date:

Site Description:

This unit is a second generation single-shell storage tank. Tank 241-S-104 is the first tank of a three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type:

Storage Tank

Waste

Waste transferred to Tank 241-S-104 included REDOX high-level and coating waste, and waste

Description: from 241-S Tank Farm.

Site Code: 241-S-105

Classification: Accepted

Site Names: 241-S-105, 241-S-TK-105

ReClassification:

Site Type: Single-Shell Tank

Start Date: 1953

Site Status:

Inactive End Date: 1976

Site Description:

This unit is a second generation single-shell storage tank. Tank 241-S-105 is the second tank of a three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type:

Storage Tank

Waste

REDOX coating and high-level waste were transferred to Tank 241-S-105.

Description:

Site Code:

241-S-106

Classification:

Accepted

Site Names:

241-S-106, 241-S-TK-106

ReClassification:

1953

Site Type: Site Status: Single-Shell Tank

Start Date: End Date:

1976

Site

Inactive

Liiu Date

19/0

Description:

This unit is a second generation single-shell storage tank. Tank 241-S-106 is the third tank of a three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type:

Storage Tank

Waste

Waste transferred to Tank 241-S-106 included REDOX high-level waste and evaporator

Description:

bottoms from the 241-S Tank Farm.

Site Code: 241-S-107 Classification: Accepted

Site Names: 241-S-107, 241-S-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1980

Site This unit is a second generation single-shell storage tank. Tank 241-S-107 is the first tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-S-107 included REDOX high-level waste and coating waste, **Description:** decontamination waste, B Plant high-level and low-level waste, Pacific Northwest Laboratory

waste, laboratory waste, N Reactor waste, PUREX low-level waste, ion exchange waste, fractionization waste, evaporator bottoms, double-shell slurry feed, partial neutralization feed, and complexed concentrate from 241-BX, 241-C, 241-S, 241-SX, 241-SY, and 241-U Tank

Farms.

Site Code: 241-S-108 Classification: Accepted

Site Names: 241-S-108, 241-S-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1979

Site This unit is a second generation single-shell storage tank. Tank 241-S-108 is the second tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste transferred to Tank 241-S-108 included REDOX high-level waste, supernatant containing

Description: REDOX high-level waste, and evaporator bottoms from 241-S and 241-SX Tank Farms.

Site Code: 241-S-109 Classification: Accepted

Site Names: 241-S-109, 241-S-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1979

Site This unit is a second generation single-shell storage tank. Tank 241-S-109 is the third tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Tank 241-S-109 received REDOX high-level waste and supernatant containing evaporator

Description: bottoms from 241-S-102 Tank.

Site Code: 241-S-110 Classification: Accepted

Site Names: 241-S-110, 241-S-TK-110 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is a second generation single-shell storage tank. Tank 241-S-110 is the first tank of a **Description:** three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to 241-S-110 included REDOX high-level coating, ion exchange waste, 224
Description: U waste, coating waste, decontamination waste, B Plant low-level waste, and organic wash waste

from 241-BX, 241-S, 241-SX, 241-T, 241-TX, and 241-U Tank Farms.

Site Code: 241-S-111 Classification: Accepted

Site Names: 241-S-111, 241-S-TK-111 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1972

Site This unit is a second generation single-shell storage tank. Tank 241-S-111 is the second tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-S-111 included REDOX high-level waste and supernatant

Description: containing evaporator bottoms from 241-S Tank Farm.

Site Code: 241-S-112 Classification: Accepted

Site Names: 241-S-112, 241-S-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1974

Site This unit is a second generation single-shell storage tank. Tank 241-S-112 is the third tank of a

Description: three-tank cascade series. This tank is a reinforced concrete, cylindrical structure with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-S-112 included REDOX high-level waste and evaporator

Description: bottoms from 241-S Tank Farm.

Site Code: 241-S-151 Classification: Accepted

Site Names: 241-S-151, 241-S-151 Diversion Box ReClassification:

Site Type: Diversion Box Start Date: 1952

Site Status: Active End Date:

Site This unit is constructed of reinforced concrete and is rectangular in shape.

Description:

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. Lead shielding may also be contained inside

the diversion box.

Site Code: 241-S-152 Classification: Accepted

Site Names: 241-S-152, 241-S-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1977Site Status:InactiveEnd Date:1980

Site This unit is constructed of reinforced concrete and is rectangular in shape. The 241-S-152

Description: Diversion Box has been weather covered.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. Lead shielding may

also be contained inside the diversion box.

Site Code: 241-S-302A Classification: Accepted

Site Names: 241-S-302A, 241-S-302-A Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1949Site Status:InactiveEnd Date:1991

Site This unit is a cylindrical, steel tank. The catch tank is buried underground for radiation shielding.

Description: The tank is surrounded with posts and chain and labeled with IMUST signs.

Waste Type: Process Effluent

Waste Description:

The tank collected leaking and excess process waste that passed through the 241-S-151 and 241-SX-152 Diversion Boxes. Wastes characteristic of the 241-S, 241-SX and 241-U Tank Farms as well as the 222-S Laboratory are expected to be present in the catch tank.

Site Code: 241-S-302B Classification: Accepted

Site Names: 241-S-302B, 241-S-302-B Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1952Site Status:InactiveEnd Date:1985

Site This unit is a horizontal, cylindrical steel tank. Tank 241-S-302B is underground to provide

Description: radiation shielding protection. The tank is surrounded with posts and chain and labeled with

IMUST signs.

Waste Type: Storage Tank

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations.

Site Code: 241-S-304 Classification: Accepted

Site Names: 241-S-304, 241-S-304 Catch Tank **ReClassification:**

Site Type: Catch Tank Start Date: 1991

Site Status: Active End Date:

The catch tank is below ground surface, inside a concrete pump pit with concrete cover blocks.

Description: The pump pit measures 3 meters by 3 meters (10 foot by 10 foot) and is 1.75 meters (5.75 feet)

deep. The catch tank is constructed of carbon steel.

Waste Type: Process Effluent

Waste The catch tank receives precipitation drainage and 241-S-151 Diversion Box drainage.

Description:

Site Code: 242-S Classification: Accepted

Site Names: 242-S, 242-S Evaporator ReClassification:

Site Type:EvaporatorStart Date:1973Site Status:InactiveEnd Date:1985

Site The 242-S Evaporator is an inactive waste management unit. The principal operating areas of the

Description: evaporator include two adjoining, but structurally independent sections. Structure A, the

processing and service area, is constructed of reinforced concrete shear walls and slab floors. Structure B of the building houses operating and support areas and is constructed of concrete

block walls and structural steel.

Waste Type: Chemicals

Waste **Description:** The unit received liquid radioactive mixed waste from the single-shell tanks through 1980. The evaporation process reduced the volume of radioactive liquid by removing the water. The

cooled vapor formed saltcake and residual liquor.

Site Code: 244-S DCRT **Classification:** Accepted

Site Names:

244-S DCRT, 244-S Double-Contained

ReClassification:

Start Date:

Receiver Tank, 244-S RT, 244-S Receiver Tank, 244-S Catch Station, 244-S-TK/SMP

Receiver Tank **Site Type:**

1987

Active **End Date: Site Status:**

Site **Description:** The 244-S Receiver Tank is constructed of carbon steel. It sets vertically inside a reinforced concrete, steel lined vault with 0.31 meters (1 foot) thick walls and a 1.4 meters (4.5 foot) thick

base. The tank vault is separated from a pump pit above by a 30 centimeter (12 inch) thick

concrete slab.

Waste Type:

Storage Tank

Waste **Description:** The unit stores and transports radioactive mixed waste solutions from processing and decontamination operations. Quantities are variable according to specific plant operations.

Site Code:

241-SX-A

Classification:

Accepted

Site Names:

241-SX-A, 241-SX-A Diversion Box

ReClassification:

Site Type:

Valve Pit

1954 **Start Date:**

Site Status: Active **End Date:**

Site

This unit is a rectangular concrete structure used to divert waste flow to the proper destination.

Description:

Valve handles extend through and above the concrete cover block.

Waste Type:

Process Effluent

Waste **Description:** The unit is used to transport radioactive waste solutions from processing and decontamination operations. Quantities are variable according to specific plant operation. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code:

241-SX-B

Classification:

Accepted

Site Names:

241-SX-B, 241-SX-B Diversion Box

ReClassification: Start Date:

1954

Site Type: **Site Status:** Valve Pit

Site

Active

End Date:

This unit is a rectangular concrete structure used to divert waste flow to the proper destination.

Description:

Valve handles extend through and above the concrete cover block.

Waste Type:

Process Effluent

Waste **Description:** The unit is used to transport radioactive waste solutions from processing and decontamination operations. Quantities are variable according to specific plant operation. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-SX-101 Classification: Accepted

Site Names: 241-SX-101, 241-SX-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1954Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-101

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-101 included: REDOX high-level waste and ion exchange waste, evaporator bottoms, partial neutralization feed, and complexed waste from 241-S, 241-

BX, 241-SX, and 241-U Tank Farms.

Site Code: 241-SX-102 Classification: Accepted

Site Names: 241-SX-102, 241-SX-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1954Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-102 is the second tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to 241-SX-102 included: REDOX high-level waste, carbonate waste, concrete, REDOX high-level waste, ion exchange waste, evaporator bottoms, and partial

neutralization feed from 241-BX, 241-SX, 241-TX, and 241-S Tank Farms.

Site Code: 241-SX-103 Classification: Accepted

Site Names: 241-SX-103, 241-SX-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1954Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-103

Description: is the third tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-103 included: REDOX high-level waste, concrete, coating

Description: waste, evaporator bottoms, organic wash waste, and partial neutralization feed from 241-BX,

241-SX, and 241-S Tank Farms.

Site Code: 241-SX-104 Classification: Accepted

Site Names: 241-SX-104, 241-SX-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1955Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-104

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-104 included: REDOX high-level waste and ion exchange **Description:** waste, double-shell slurry feed, and evaporator bottoms from the 241-SX Tank

Farms.

Site Code: 241-SX-105 Classification: Accepted

Site Names: 241-SX-105, 241-SX-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1955Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-105

Description: is the second tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-105 included: REDOX high-level waste and ion exchange **Description:** waste, double-shell slurry feed, evaporator bottoms, and partial neutralization feed from 241-

DV 241 C 241 V and 241 H Tonk Forms

BX, 241-S, 241-X, and 241-U Tank Farms.

Site Code: 241-SX-106 Classification: Accepted

Site Names: 241-SX-106, 241-SX-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1954Site Status:InactiveEnd Date:1980

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-106

Description: is the third tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-106 included: Hanford laboratory waste, Pacific Northwest Laboratory waste, REDOX and waste fractionization ion exchange waste, evaporator bottoms, B

Plant low level waste, PUREX low level waste, coating waste, and partial neutralization feed from 241-B, 241-BX, 241-C, 241-S, 241-SX, 241-SY, 241-TX, and 241-U Tank Farms.

Site Code: 241-SX-107 Classification: Accepted

Site Names: 241-SX-107, 241-SX-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1964

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-107

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-107 included: coating waste and REDOX high-level waste.

Description: The unit contains 41 small bottles of neutralized waste from 100 F Area, each containing less

than 1 gram (0.04 ounce) Plutonium 239.

Site Code: 241-SX-108 Classification: Accepted

Site Names: 241-SX-108, 241-SX-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1955Site Status:InactiveEnd Date:1962

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-108

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-108 included: REDOX high-level waste, concrete, and

Description: supernatant containing REDOX high-level waste from the 241-SX Tank Farm.

Site Code: 241-SX-109 Classification: Accepted

Site Names: 241-SX-109, 241-SX-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1955Site Status:InactiveEnd Date:1965

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-109

Description: is the third tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-109 included: REDOX high-level waste and supernatant

Description: containing REDOX high-level waste from the 241-SX Tank Farm.

Site Code: 241-SX-110 Classification: Accepted

Site Names: 241-SX-110, 241-SX-TK-110 ReClassification:

Site Type: Single-Shell Tank Start Date: 1960

Site Status: Inactive End Date: 1976

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-110

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-110 included: REDOX high-level waste, concrete, Pacific **Description:** Northwest Laboratory waste, B Plant low-level waste, ion exchange waste, evaporator bottoms,

and 224-U waste from 241-B, 241-BX, and 241-SX Tank Farms. Additionally sixteen plastic bottles or containers containing a total of 4 ounces (110 grams) natural uranium, 2 ounces (62 grams) depleted uranium, 0.21 ounce (6 grams) enriched uranium, and 7 ounces (204 grams)

plutonium were added to this unit.

Site Code: 241-SX-111 Classification: Accepted

Site Names: 241-SX-111, 241-SX-TK-111 ReClassification:

Site Type: Single-Shell Tank Start Date: 1956
Site Status: Inactive End Date: 1974

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-111

Description: is the second tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-111 included: REDOX high-level waste and supernatant

Description: containing REDOX high-level waste and REDOX ion exchange waste from the 241-SX Tank

Farm.

Site Code: 241-SX-112 Classification: Accepted

Site Names: 241-SX-112, 241-SX-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1969

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-112

Description: is the third tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-112 included: REDOX high-level waste and supernatant

Description: containing REDOX high-level waste from 241-SX Tank Farm.

Site Code: 241-SX-113 Classification: Accepted

Site Names: 241-SX-113, 241-SX-TK-113 ReClassification:

Site Type: Single-Shell Tank Start Date: 1958

Site Status: Inactive End Date: 1962

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-113

Description: is the first tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-113 included: REDOX high-level waste. Diatomaceous

Description: earth was also added in 1962.

Site Code: 241-SX-114 Classification: Accepted

Site Names: 241-SX-114, 241-SX-TK-114 ReClassification:

Site Type:Single-Shell TankStart Date:1957Site Status:InactiveEnd Date:1972

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-114

Description: is the second tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-114 included: REDOX high-level waste and ion exchange

Description: waste, and evaporator bottoms from 241-SX Tank Farm.

Site Code: 241-SX-115 Classification: Accepted

Site Names: 241-SX-115, 241-SX-TK-115 ReClassification:

Site Type:Single-Shell TankStart Date:1958Site Status:InactiveEnd Date:1965

Site This unit is a third generation single-shell tank designed for self-boiling waste. Tank 241-SX-115

Description: is the third tank of a three tank cascade series. This tank is a reinforced concrete, cylindrical

structure with a steel liner. The tank is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-SX-115 included: REDOX high-level waste and supernatant

Description: containing REDOX high-level waste.

Site Code: 241-SX-151 Classification: Accepted

Site Names: 241-SX-151, 241-SX-151 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1954Site Status:InactiveEnd Date:1983

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: Operations. Volumes were variable according to specific plant operation. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-SX-152 Classification: Accepted

Site Names: 241-SX-152, 241-SX-152 Diversion Box, ReClassification:

241-SX-152 Transfer Box

Site Type:Diversion BoxStart Date:1954Site Status:InactiveEnd Date:1981

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-SX-401 Classification: Accepted

Site Names: 241-SX-401, 241-SX-401 Condenser ReClassification:

Shielding Building, 241-SX-401 Waste

Disposal Condenser House

Site Type: Process Unit/Plant Start Date: 1954
Site Status: Inactive End Date: 1975

Site This unit is constructed of reinforced concrete with walls varying in thickness from 0.31 to 0.77

Description: meters (1 to 2.5 feet) thick for shielding purposes.

Waste Type: Equipment

Waste The unit contains radioactively contaminated equipment and concrete. The quantity of waste has

Description: not been determined. Radiation levels are high.

Site Code: 241-SX-402 Classification: Accepted

Site Names: 241-SX-402, 241-SX-402 Condenser

Shielding Building, 241-SX-402 Waste

Disposal Condenser House

Site Type:Process Unit/PlantStart Date:1954Site Status:InactiveEnd Date:1975

Site This unit is constructed of reinforced concrete with walls varying in thickness from 0.31 to 0.77

ReClassification:

Description: meters (1 to 2.5 feet) thick for shielding purposes.

Waste Type: Equipment

Waste The unit contains radioactively contaminated equipment and concrete. The quantity of waste has

Description: not been determined. The unit is only mildly contaminated.

Site Code: 241-SY-A Classification: Accepted

Site Names: 241-SY-A, 241-SY-A Diversion Box, 241- ReClassification:

SY-A Valve Pit

Site Type: Valve Pit Start Date: 1977

Site Status: Active End Date:

Site The 241-SY-A Valve Pit is fabricated from reinforced concrete. All concrete and ferrous

Description: materials are treated with a protective coating. This unit has two cover blocks with valve handles

extending through penetrations in the cover blocks.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-SY-B Classification: Accepted

Site Names: 241-SY-B, 241-SY-B Diversion Box, 241- ReClassification:

SY-B Valve Pit

Site Type: Valve Pit Start Date: 1977

Site Status: Active End Date:

Site The 241-SY-B Valve Pit is fabricated from reinforced concrete. All concrete and ferrous

Description: materials are treated with a protective coating. This unit has two cover blocks with valve handles

extending through penetrations in the cover blocks.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-SY-101 Classification: Accepted

Site Names: 241-SY-101, 241-SY-TK-101 ReClassification:

Site Type: Double-Shell Tank Start Date: 1977

Site Status: Active End Date:

Site This unit is fabricated as three concentric tanks. The primary tank and secondary tank are made

Description: of carbon steel with the secondary tank being larger in diameter than the primary tank. The space between the carbon steel tanks is referred to as the annulus. The third tank is a concrete shell that encloses both the primary and secondary tanks for additional containment, radiation shielding, and structural support. The 241-SY-101 Double Shell Tank is underground to provide shielding

from radiation.

Waste Type: Storage Tank

Waste Waste transferred to this unit includes double-shell slurry, and radioactive mixed waste from

Description: tanks 241-SY-102, 241-SX-106, and 241-U-111.

Site Code: 241-SY-102 Classification: Accepted

Site Names: 241-SY-102, 241-SY-TK-102 ReClassification:

Site Type: Double-Shell Tank Start Date: 1977

Site Status: Active End Date:

Site This unit is fabricated as three concentric tanks. The primary tank and secondary tank are made **Description:** of carbon steel with the secondary tank being larger in diameter than the primary tank. The space

of carbon steel with the secondary tank being larger in diameter than the primary tank. The space between the carbon steel tanks is referred to as the annulus. The third tank is a concrete shell that encloses both the primary and secondary tanks for additional containment, radiation shielding, and structural support. The 241-SY-102 Double Shell Tank is underground to provide shielding

from radiation.

Waste Type: Storage Tank

Waste The unit received supernatant containing partial neutralization feed, double-shell slurry feed,

Description: double-shell slurry, and noncomplexed wastes from 241-S, -SX, -TX, and -U Tank Farms. This

tank is primarily used as an evaporator feed tank.

Site Code: 241-SY-103 Classification: Accepted

Site Names: 241-SY-103, 241-SY-TK-103 ReClassification:

Site Type: Double-Shell Tank Start Date: 1977

Site Status: Active End Date:

Site This unit is fabricated as three concentric tanks. The primary tank and secondary tank are made of carbon steel with the secondary tank being larger in diameter than the primary tank. The space

between the carbon steel tanks is referred to as the annulus. The third tank is a concrete shell that encloses both the primary and secondary tanks for additional containment, radiation shielding,

and structural support. The 241-SY-103 Double Shell Tank is underground to provide shielding

from radiation.

Waste Type: Storage Tank

Waste The unit received supernatant containing complexed waste and double-shell slurry from 241-S

Description: and -SY tanks from the 242-A Evaporator.

Site Code: 200-W-37 Classification: Accepted

Site Names: 200-W-37, Buried Tygon Tubing near 241- ReClassification: Rejected (Consolidation) (6/13/

S-101

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is not separately marked or posted.

Description:

Waste Type: Equipment

Waste The equipment was radioactive tygon tubing.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: 200-W-96 Classification: Accepted

Site Names: 200-W-96, Contaminated Soil at 241- ReClassification:

S/SX/SY Tank Farm

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is the soil inside and adjacent to the chain link fence that surrounds the 241-S/SX/SY

Description: Tank Farms. Various radiological postings and warning signs are attached to the chain link

fence. The interior of the tank farm complex is covered with gravel. Many risers and monitoring devices for the underground structures are visible on the surface. The individual unplanned releases associated with the 241-S,SX,SY Tank Farms are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. The 216-S-3 crib, 216-S-15 overflow pond and a portion of the 242-

S Evaporator building are also located inside the tank farm fence.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne Contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: 200-W-37

Site Names: 200-W-37, Buried Tygon Tubing near 241-S-101

Reason: Within Boundary Of Larger Site

Site Code: 200-W-54

Site Names: 200-W-54, Contamination Migration from 241-SX Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-49

Site Names: UPR-200-W-49, Contamination Southeast of 241-SX, UN-200-W-49

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-50

Site Names: UPR-200-W-50, UN-200-W-50, Contamination Spread from 241-SX-114

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-80

Site Names: UPR-200-W-80, UN-200-W-80, 241-S/SX Contamination Migration

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-81

Site Names: UPR-200-W-81, UN-200-W-81, Contamination Specks in 241-S/SX

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-127

Site Names: UPR-200-W-127, Liquid Release from 242-S Evaporator to the Ground, UN-200-W-127

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-140

Site Names: UPR-200-W-140, 241-SX-107 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-141

Site Names: UPR-200-W-141, 241-SX-108 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-142

Site Names: UPR-200-W-142, 241-SX-109 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-143

Site Names: UPR-200-W-143, 241-SX-111 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-144

UPR-200-W-144, 241-SX-112 Leak **Site Names:** Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-145

Site Names: UPR-200-W-145, 241-SX-113 Leak Within Boundary Of Larger Site Reason:

Site Code: UPR-200-W-146

UPR-200-W-146, 241-SX-115 Leak **Site Names:** Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-50 **Classification:** Accepted

UPR-200-W-50, UN-200-W-50, **ReClassification:** Rejected (Consolidation) (6/13/ **Site Names:**

Contamination Spread from 241-SX-114

Site Type: Unplanned Release **Start Date:** 1958

Site Status: Inactive **End Date:**

Site The tank farm is surrounded with a chain link fence and posted with radiological warning signs. **Description:**

The Unplanned Release is not separately marked inside the tank farm fence or posted outside the

fence.

Waste Type: Process Effluent

The release included contamination specks from 241-SX-114 and 241-SX-113 with Waste **Description:** beta/gamma readings of 40,000 counts/minute and spots up to 100 millirads/hour.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Within Boundary Of Larger Site Reason:

Site Code: UPR-200-W-80 **Classification:** Accepted

Site Names: UPR-200-W-80, UN-200-W-80, 241-S/SX **ReClassification:** Rejected (Consolidation) (6/13/

Contamination Migration

1978 Unplanned Release **Start Date:** Site Type: **Site Status:** Inactive **End Date:** 1978

The 241-S/SX Tank Farms are surrounded with a chain link fence and posted with radiological Site

warning signs. The unplanned release is not separately marked or posted. **Description:**

Process Effluent **Waste Type:**

Waste Laboratory analysis of some of the contamination found contained 1.4 microcuries of strontium-90 and a trace amount of cesium-137 with maximum readings of 60,000 counts per minute. **Description:**

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-81 Classification: Accepted

Site Names: UPR-200-W-81, UN-200-W-81, ReClassification: Rejected (Consolidation) (6/13/

Contamination Specks in 241-S/SX

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

Site The tank farm is surrounded with a chain link fence and posted with radiological warning signs.

Description: The unplanned release is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of airborne contamination from surface contaminated tank farm

Description: equipment. Contamination readings ranged from 500 to more than 100,000 counts per minute.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-82 Classification: Accepted

Site Names: UPR-200-W-82, UN-200-W-82, ReClassification:

Contamination Spread at 240-S-151

Site Type: Unplanned Release Start Date: 1980
Site Status: Inactive End Date: 1980

Site The 240-S-151 Diversion Box is posted with radiological warning signs. The contamination

Description: spread occurred in the soil adjacent to the diversion box. The unplanned release is not separately

marked or posted.

Waste Type: Process Effluent

Waste The release consisted of beta/gamma particulates that spread from a contaminated piece of equipment, with readings up to 80,000 counts per minute found outside the radiation zone.

Site Code: UPR-200-W-140 Classification: Accepted

Site Names: UPR-200-W-140, 241-SX-107 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1956Site Status:InactiveEnd Date:1964

Site The release is the soil beneath the 241-SX-107 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of REDOX high-level wastes and REDOX coating wastes.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-141 Classification: Accepted

Site Names: UPR-200-W-141, 241-SX-108 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1962Site Status:InactiveEnd Date:1962

Site The release is the soil under the 241-SX-108 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of REDOX waste containing 2,000 curies of cesium-137.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-142 Classification: Accepted

Site Names: UPR-200-W-142, 241-SX-109 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1965

Site The release is the soil under the 241-SX-109 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of REDOX high-level process waste.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-143 Classification: Accepted

Site Names: UPR-200-W-143, 241-SX-111 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1958Site Status:InactiveEnd Date:1974

Site The release site is the soil below the 241-SX-111 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of REDOX high-level waste supernate and ion exchange waste from 241-

Description: SX Tanks.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-144 Classification: Accepted

Site Names: UPR-200-W-144, 241-SX-112 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1959Site Status:InactiveEnd Date:1969

Site The release is soil under the 241-SX-112 Tank. The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of REDOX high-level supernate, containing 40,000 curies of cesium-137.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-145 Classification: Accepted

Site Names: UPR-200-W-145, 241-SX-113 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1956Site Status:InactiveEnd Date:1958

Site The release is the soil under the 241-SX-113 Tank. The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The waste consisted of REDOX high-level process waste, containing 8,000 curies of cesium-137.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-146 Classification: Accepted

Site Names: UPR-200-W-146, 241-SX-115 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1958Site Status:InactiveEnd Date:1965

Site The release is the soil under the 241-SX-115 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of high-level REDOX process waste, containing 40,000 curies (1.5E15) of

Description: cesium-137.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

200-SC-1

Site Code: 207-A-NORTH Classification: Accepted

Site Names: 207-A-NORTH, 207-A, 207-A Retention ReClassification:

Basin, 207-A-NORTH Retention Basin,

207-A North

Site Type:Retention BasinStart Date:1977Site Status:InactiveEnd Date:1999

Site The 207-A North basins consist of three Hypalon lined, concrete basins. The basins are surrounded with posts and chain. There is no radiological posting on the north basins.

Waste Type: Steam Condensate

Waste The basins have been receiving steam condensate from the 242-A Evaporator since 1977.

Description: Effluent was originally sent to the 216-A-25 (Gable Pond) and later to the B Pond system.

When the B-Ponds became inactive, effluent was diverted to TEDF.

Site Code: 216-A-6 Classification: Accepted

Site Names: 216-A-6, 216-A-6 Cavern ReClassification:

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1970

Site The site is marked with AC-540 markers and posted with Underground Radioactive Material signs. The unit was constructed with a 38-centimeter (15-inch) Vitrified Clay Pipe (VCP) placed

horizontally 3.7 meters (12 feet) below grade the length of the unit. Five 31-meter (100-foot) lengths of perforated 15-centimeter (6-inch) V.C.P. are placed perpendicularly to the first pipe at 6.1-meter (20-foot) intervals. The site contains approximately 2,580 cubic meters (91,000 cubic feet) of coarse gravel fill, backfilled over. The side slope from the surface to 2.1 meters (7 feet) is

1:1 and from 2.1 meters (7 feet) to the site bottom, 2:1.

Waste Type: Process Effluent

Waste Until January 1961, the site received the steam condensate, the equipment disposal tunnel floor drainage, the water-filled door drainage and the slug storage basin overflow waste from the 202-

A Building. From January 1961 to March 1966, the site was inactive. After March 1966, the site received the previously mentioned effluents again. The waste is low in salt and is neutral to

basic.

Site Code: 216-A-30 Classification: Accepted

Site Names: 216-A-30, 216-A-30 Crib ReClassification:

Site Type:CribStart Date:1961Site Status:InactiveEnd Date:1992

Site The crib is surrounded with concrete AC-540 markers and posted with Underground Radioactive

Description: Material signs.

Waste Type: Process Effluent

Waste Description:

Until 11/65, the site received the steam condensate, equipment disposal tunnel floor and water-filled door drainage, and the slug storage basin overflow waste from 202-A Building. From 11/65 to 1/70, the 216-A-6 Crib was restored to service to receive some of the above effluents because the effluent flow rate had exceeded the infiltration capacity of this unit. From 1/70 to 6/92, the site received the above effluent because the 216-A-6 Crib was deactivated. The waste was low in salt and is neutral to basic. TPA Milestone M-17-22A required that PUREX steam condensate discharge to 216-A-30 Crib be discontinued by June 1992. The fourth amendment to the TPA (89-10 Rev 3) documents that the steam condensate stream was shut down in June 1992 and that all discharges to this crib were discontinued. The unit was permanently isolated in 1995.

Site Code: 216-A-37-2 Classification: Accepted

Site Names: 216-A-37-2, 216-A-37-2 Crib ReClassification:

Site Type:CribStart Date:1983Site Status:InactiveEnd Date:1995

Site The crib is marked with concrete AC-540 posts and Underground Radioactive Material signs.

Description:

Waste Type: Steam Condensate

Waste The site received steam condensate from PUREX (parallel operation of this unit and 216-A-30).

Description: The PUREX steam condensate stream was shut down in June 1992 (DOE/RL-82-28). TPA

milestone M-17-22A required that PUREX steam condensate discharge to 216-A-37-2 Crib be

discontinued by June 1992.

Site Code: 216-B-55 Classification: Accepted

Site Names: 216-B-55, 216-B-55 Enclosed Trench, 216- ReClassification:

B-55 Crib

Site Type:CribStart Date:1967Site Status:InactiveEnd Date:1991

Site The site is marked with concrete AC-540 markers and posted with Underground Radioactive

Description: Material signs.

The unit is filled with approximately 1380 cubic meters (1,800 cubic yards) of gravel. A perforated 30 centimeter (30 inch) diameter galvanized pipe runs the length of the unit, 0.9 meters (3 feet) above the bottom. The site had two gage wells of 20 centimeter (8 inch) steel pipe with a galvanized sheet metal cap. Each well extended from the crib bottom to approximately 0.9 meters (3 feet) above grade. The crib was constructed with 19,500 square feet of membrane barrier.

Waste Type: Steam Condensate

Waste The site has received steam condensate from 221-B Building. The waste is low in salt and is **Description:** neutral to basic. The steam condensate was sent to the 216-B-55 Crib from 1967 to 1990.

(DOE/RL-89-28) TPA milestone M-17-25 required all discharge to the crib to be ceased by

Sept. 1991.

Site Code: 216-B-64 Classification: Accepted

Site Names: 216-B-64, 216-B-64 Retention Basin, 216-

B-64 Trench, 216-B-64 Crib

ReClassification:

Site Type:Retention BasinStart Date:1974Site Status:InactiveEnd Date:1997

Site The chain link fence that once surrounded the basin has been removed. It is currently surrounded

Description: with light post and chain and posted as an Underground Radioactive Material Area.

The basin contains a rubber bladder with a 190,000 liter (50,000 gallon) capacity. The unit is divided into two 6.1 meter (20 feet) by 19.8 meter (65 feet) sections. A concrete roof covers the

basin.

Waste Type: Steam Condensate

Waste The unit was intended to receive steam condensate from the 221-B Building that exceeded

Description: release limits. A facility test was conducted, but the basin was never used.

Site Code: 200-E-113 Classification: Accepted

Site Names: 200-E-113; Pipeline from PUREX to 216-

A-30 Crib, 216-A-42C Valve Box

 ${\bf Re Classification:}$

Site Type: Process Sewer Start Date:
Site Status: Inactive End Date:

The site is an underground 0.406 meter (16 inch) diameter steel pipeline that extends from the **Description:** PUREX Plant to a distribution box located on the west side of the 216-A-6 Crib and continues

eastward to the 216-A-30 Crib. The pipeline is marked with steel fence posts, posted as "Underground Radioactive Material" (URM) and "Pipeline" over its entire length. The 216-A-42C Valve Box is located on the pipeline, inside a domed cover. It is surrounded by a broken, wood fence. A small area just west of the 216-A-42C Valve Box has been stabilized with cobbles and separately posted as URM. Most of the pipeline is free of vegetation except for tumbleweeds

near the 216-A-30 Crib.

Waste Type: Process Effluent

Waste The waste is the pipeline and adjacent soil contaminated from pipeline leaks.

Description:

Site Code: 216-S-5 Classification: Accepted

Site Names: 216-S-5, 216-S-5 Cavern #1, 216-S-6 Crib, ReClassification:

216-S-9

Site Type:CribStart Date:1954Site Status:InactiveEnd Date:1957

Site The site consists of a gravel-filled crib containing two lengths of perforated, corrugated metal

Description: pipe that form a cross. The crib has been surface stabilized. It is marked and posted with

Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received process vessel cooling water and steam condensate from 202-S Building via

Description: the 207-S Retention Basin. The waste was acidic and contained nitrates.

Classification: Site Code: 216-S-6 Accepted

Site Names: 216-S-6, 216-S-6 Cavern #2, 216-S-5 Crib, **ReClassification:**

216-S-13 Crib

Site Type: Crib **Start Date:** 1954 **Site Status:** Inactive **End Date:** 1972

Site This unit consists of a square pit filled with gravel with corrugated metal perforated pipe running

Description: down the center, and six pipes branching off perpendicular to the main pipe. The site is backfilled

and marked with Underground Radioactive Material signs.

Waste Type: Process Effluent

From November 1954 until June 1967, the site received the process vessel cooling water and Waste steam condensate from the 202-S Building. From June 1967 to July 1967, production operations **Description:**

were shut down and the 202-S Building was put on standby. After July 1967, the site received the steam condensate from the D-12 and D-14 Waste Concentrators in the 202-S Building. The

waste is low in salt, neutral to basic, and contains nitrates.

Site Code: 216-S-25 **Classification:** Accepted

216-S-25, 216-S-25 Crib **ReClassification: Site Names:**

1973 **Site Type:** Crib **Start Date: Site Status:** Inactive **End Date:** 1992

The site is marked with AC-540 markers and posted with Underground Radioactive Material Site

signs. A distribution pipe is located 7 ft (2.1 m) below grade. The site contains approximately **Description:**

41,000 cubic feet (1160 m³) of gravel.

Waste Type: Steam Condensate

Waste Until 11/80, the site received the 242-S Evaporator process steam condensate. Since 11/80, the

Description: 242-S Evaporator has been in standby mode. In 1985, this crib received the effluent from the

216-U-1 & 2 groundwater pump and treat effort. The 241-SX Sludge Cooler Steam Heater was shut off in 1992 due to leaking tubes. A new steam heater unit was installed in 1993 and scheduled to start up in 1995. It was to operate for five months (through winter and early spring)

producing approximately 15 to 30 liters (4-8 gallons) of condensate per hour that would be

discharged to the 216-S-25 crib.

Site Code: 216-T-36 Classification: Accepted

Site Names: 216-T-36 Crib **ReClassification:**

Site Type: Start Date: 1967 Crib **Site Status:** Inactive **End Date:** 1973

Site The site consists of a interim stabilized crib posted as "Underground Radioactive Material". The

site consists of a single vitreous clay distribution pipe resting in a gravel layer that is in a **Description:**

rectangular trench. Backfill covers the pipe and gravel. The crib also has a gage well riser and a filter riser.

Waste Type: Process Effluent

Waste The site waste contained sodium hydroxide.

Description:

Site Code: 200-W-79 Classification: Accepted

Site Names: 200-W-79; 216-T-36 Crib pipeline **ReClassification:**

Site Type:Process SewerStart Date:Site Status:InactiveEnd Date:

Site The site is a 10 centimeter (4 inch) diameter, vitrified clay underground pipeline that fed the 216-

Description: T-36 Crib. There are three separate posted Contamination Areas located on top of this pipeline,

west of the 216-T-36 Crib.

Waste Type: Soil

Waste The waste is the pipeline and contaminated soil from apparent pipeline leaks. Contaminated

Description: vegetation has been identified growing on this pipeline.

Site Code: 207-Z Classification: Accepted

Site Names: 207-Z, 207-Z Retention Basin, 241-Z **ReClassification:**

Retention Basin, 241-Z-RB

Site Type:Retention BasinStart Date:1949Site Status:InactiveEnd Date:1959

Site Two concrete basin structures within one concrete structure. The basins are separated by a 0.3

Description: meter (1 foot) thick concrete wall. There is a woven wire fence around the top perimeter, 1.8

meter (6 feet) high. Each basin contains a sump with a sump pump.

Waste Type: Steam Condensate

Waste The site received potentially contaminated waste. Steam condensate and cooling water, via the

Description: D-3 piping system, was sent to this holding facility then released to the 216-Z-1 and 216-Z-11

Ditches.

Site Code: UPR-200-E-19 Classification: Accepted

Site Names: UPR-200-E-19, Contamination Release at **ReClassification:**

216-A-6 Sampler, UN-200-E-19

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The unplanned release is not separately marked or posted. The 216-A-6 crib has been surface

Description: stabilized and is posted with Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The site received low-level fission products that dripped onto the ground from the vent pipe

Description: bonnet.

Site Code: UPR-200-E-21 Classification: Accepted

Site Names: UPR-200-E-21, 216-A-6 Overflow, UN- ReClassification:

200-E-21

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The unplanned release is not separately marked or psoted. The 216-A-6 Crib area has been

Description: surface stabilized and is posted as "Underground Radioactive Material."

Waste Type: Process Effluent

Waste The release contaminated the crib surface with beta/gamma with readings to 500 millirads/hour.

Description:

Site Code: UPR-200-E-29 Classification: Accepted

Site Names: UPR-200-E-29, 216-A-6 Overflow, UN- ReClassification:

200-E-29

Site Type: Unplanned Release Start Date: 1961

Site Status: Inactive End Date:

Site The 216-A-6 Crib area has been surface stabilized and is posted as "Underground Radioactive

Description: Material."

Waste Type: Process Effluent

Waste The release contaminated the crib surface with beta/gamma with readings to 30 rads/hour at a

Description: distance of 1.2 meters (4 feet).

200-SO-1

Site Code: 201-C Classification: Accepted

Site Names: 201-C, 201-C Process Building ReClassification:

Site Type:Process Unit/PlantStart Date:1949Site Status:InactiveEnd Date:1967

Site The 201-C facility has been covered with ash material and posted with Underground Radioactive **Description:** Material signs. The current configuration of the building includes the lower 3 meters (10 feet) of

the building filled with grout and partially covered with 3 meters (10 feet) of ash. The 201-C Process Building consisted of three integrated cells, seven process galleries, an exhaust system, a hot shop, and an air treatment room. Two additional cells were connected to the east side of the

building. The process cells are primarily constructed of reinforced concrete.

Waste Type: Equipment

Waste The building remnants contain radioactive and chemically contaminated structures, piping, and **Description:** equipment. There is also a large quantity of lead shielding associated with the hot cells. All

shielding was left in place.

Waste Type: Chemicals

Waste There is residual chemical and radiological contamination present in the structure. According to Description: DOE/RL-92-18 Revision 0, the radiological inventory is estimated to include: 68.3 curies of

DOE/RL-92-18 Revision 0, the radiological inventory is estimated to include: 68.3 curies of plutonium, 9,000 curies of strontium, and 0.2 curies of americium. Chemical wastes in the

structure include solvents, acids and other process chemicals.

Site Code: 215-C Classification: Rejected (Proposed)

Site Names: 215-C, 215-C Gas Preparation Building **ReClassification:**

Site Type:Process Unit/PlantStart Date:1949Site Status:InactiveEnd Date:1985

Site The 215-C Gas Preparation Building is single-level concrete building within the radiation control

Description: area for the Semiworks Complex. The building has two rooms and a gas bottle storage area on

the south side of the building.

Waste Type: Equipment

Waste The unit consists of a previously radioactively contaminated structure. The building was decontaminated in 1985, and was subsequently used to store equipment. The Semiworks

Aggregate Area Management Study Report (DOE/RL-92-18) does not show any remaining

radionuclide waste inventory for the 215-C Building.

Site Code: 291-C Classification: Accepted

Site Names: 291-C, 291-C Filter/Fan House, 291-C Fan ReClassification:

and Filter Building, 201-C Air Tunnel

Site Type: Process Unit/Plant Start Date: 1949

Site Status: Inactive **End Date:** 1987

Site

This building was demolished prior to the 291-C-1 Stack demolition in 1988. The unit consisted of an air tunnel from the 201-C Cells, fiber glass filters, high-efficiency particulate air (HEPA) **Description:**

filters, and the Fan House. The Fan House and HEPA Filter 2 were located above ground. HEPA Filter 1 and the concrete air tunnel were constructed below grade. The air tunnel connected the 201-C Building with the 291-C-1 Stack. The first 31 meters (100 feet) of the tunnel are 6 meters (20 feet) below grade. The second 31 meters (100 feet) of the tunnel are 1.5 meters (5 feet) below grade. There were forty removable aluminum cartridge glass fiber filters and an array of HEPA filters. The fan house building was a wood frame structure on a concrete slab. It contained two

electric fans and one steam turbine fan.

Waste Type: Equipment

Waste

Description:

Waste Type: Equipment

Waste

Description:

Site Code: 200-E-41 Classification: Accepted

Site Names: 200-E-41, Stabilized Hot Semiworks Area, **ReClassification:**

UN-216-E-38, Strontium Semi-Works

Stabilized Area

Unplanned Release 1949 **Site Type: Start Date: End Date:** 1992 **Site Status:** Inactive

This site is a large area posted with chain and "Underground Radioactive Material" signs. An Site

area within the posted boundaries has been covered with fly ash. The ash-covered area **Description:**

encompasses the decommissioned 201-C Building, the 291-C Stack Burial Trench and the 216-C-

2 French Drain. Waste sites and facilities buried beneath the ash are not individually

distinguishable.

Waste Type:

The area covered with clean backfill contained residual contamination from the operation of the Waste

Hot Semiworks facility. **Description:**

200-SS-1

2703-E HWSA **Site Code: Classification:** Accepted

2703-E HWSA, 2703-E Hazardous Waste **ReClassification:** Rejected (9/6/2000) **Site Names:**

Storage Area

Storage Pad (<90 day) **Start Date:** 1984 **Site Type:** 1996 **Site Status:** Inactive **End Date:**

The site was a hazardous waste storage area located in a three-sided steel shed. The shed is on a Site **Description:** concrete pad. The site is currently in use as an equipment storage area. There is a metal cabinet

in the shed that is used to hold non-regulated soiled shop rags for pickup by the laundry services.

Waste Type: Barrels/Drums/Buckets/Cans

The 2703-E Hazardous Waste Staging Area typically contained wastes such as alkaline liquids, Waste sodium hydroxide, sodium dichromate containing process solutions, and waste acids. Use of the **Description:**

90-day waste storage pad was discontinued by November 4, 1996.

Site Code: 2715-EA HWSA Classification: Accepted

Site Names: 2715-EA HWSA, 2715-EA Hazardous **ReClassification:** Rejected (9/14/2000)

Waste Storage Area, 2715-EA Paint Spray

Booth Annex

Site Type: Start Date: 1984 Storage Pad (<90 day)

Site Status: Inactive **End Date:**

Site The 2715-EA Hazardous Waste Staging Area is no longer active. All associated wastes have been removed. The area is currently used for storing new drums, excess material, scrap metal for **Description:**

recycling, non-regulated wastes, and flammable materials.

The pad was in a shed, which is still standing, with a chain link fence as the front wall. Adjacent to the west side of the shed are two conex boxes and two chain-link fenced areas which are used as additional storage space.

During a site visit on April 11, 2000, it was observed that the shed is labeled "No Smoking," "New Drum Storage" and "Danger - Items in this Building Contain Asbestos." The shed corresponds to the mapped location for building 2715-EA but the shed is not labeled with this number nor could any nearby building be located with this number. The shed contains primarily drums and also some packaged material sitting on a pallet. Material sitting on the concrete in front of the shed includes: other new drums, dollies for moving the drums, wooden boxes and metal cabinets. Some of the metal cabinets are marked "Excess."

There are two conex boxes just west of the shed. These are marked "Conex 1" and "Conex 2." Conex 2 is closest to the shed. Both conex boxes have vents on the top. The area between the two conex boxes and the area between Conex 2 and the shed are fenced. The area between the two conex boxes is labeled "No Smoking or Open Flame" and "Non-regulated Waste Storage." The area between Conex 2 and the shed is labeled "Empty Drums to be Crushed for Scrap Metal." This second fenced area also contains two yellow metal cabinets marked "Flammable." Deford and Carpenter (1995) reported that one of these fenced areas was labeled with "Hazardous Waste 90-Day Storage" signs.

Waste Type: Barrels/Drums/Buckets/Cans **Waste** The typical wastes held here were waste paint and thinning solvents. **Description:**

Site Code: 2101-M POND Classification: Accepted

Site Names: 2101-M POND, 2101-M Pond ReClassification: Closed Out (10/26/1995)

Site Type:PondStart Date:1953Site Status:InactiveEnd Date:1995

Site The site is an unlined "U" shaped ditch. It is surrounded with post and chain. Many tumbleweeds

Description: have collected in this area.

Waste Type: Water

Waste From 1953 until 1983, the pond received small volumes of swamp-cooler condensate, overflow drain wastewater from the 2101-M air conditioning system, steam trap condensate and storm

water runoff. From 1983 to July 1984, laboratory wastes such as barium chloride solutions, nitric acid and hydrochloric acid were discharged to the unit. Quantities are estimated at less than 1900 liters per year (500 gallons per year). Nitric acid and hydrochloric acid discharge

quantities are estimated at 1 to 10 kilograms per year (2.2 to 22 pounds per year).

200-SS-2

Site Code: 200-W ADS Classification: Accepted

Site Names: 200-W ADS, 200-W Ashpit Demolition Site ReClassification: Closed Out (10/26/1995)

Site Type:Coal Ash PitStart Date:1984Site Status:InactiveEnd Date:1995

Site The site is no longer marked or posted. The site had been marked with a nylon rope and a sign

Description: stating "RCRA Waste Site - Do Not Disturb".

Waste Type: Chemicals

Waste 1984 detonations: p-dioxane 3.4 kg (7.5 lb); tetrahydronaphthalene 3.76 kg (8.29 lb); **Description:** tetrahydrofuran 9.08 kg (20.00 lb); benzene 9.47 kg (20.88 lb); diisopropyl benzene 6.06 kg

(13.36 lb); bromobenzene 15.1 kg (33.3 lb); 1,4-dioxane 757 g (1.67 lb); polyethylene glycol monoethyl ether 757 g (1.67 lb); 1,2-bis(2-chlorethoxy)ethane 3.02 kg (6.66 lb); dioxane 567 g (1.25 lb); 2-butoxyethanol 3.02 kg (6.66 lb). 1985 detonations: none. 1986 detonations: tetrahydrofuran 6.1 kg (13.4 lb); triethylborane 500 g (1.1 lb); lithium hydride 230 g (0.51 lb);

acrolein 400 g (0.88 lb); hydrazine 1 kg (2.2 lb); aluminum chloride 450 g (1.0 lb);

unsymmetrical dimethyl hydrazine 10 g (0.02 lb); p-nitrobenzoyl chloride 100 g (0.22 lb);

sodium peroxide 340 g (0.75 lb); benzene/butyl lithium solution 900 g (2.0 lb);

hexane/benzene/butyl lithium/tetrahydrofuran 1 kg (2.2 lb); chromium metal powder 454 g (1.0 lb); toluene/ ether/benzene/ethylacetate 4 kg (8.8 lb); heptane/diethyl ether 4 kg (8.8 lb); ethyl

ether/allyl magnesium bromide 1 kg (2.2 lb); benzene/ethyl acetate/

tertahydrofuran/ether/toluene/ hydrogen sulfide/methanol 4 kg (8.8 lb); ethyl ether 29.7 kg (65.5 lb); picric acid 460 g (1.01 lb); isopropyl ether 1 kg (2.2 lb); butoxyethanol 946 g (2.1 lb); butyl cellosolve 89 g (0.2 lb); carbon trichloride 445 g (0.98 lb); butyl ethanol 9.46 kg (20.9 lb);

phenylether 235 g (0.52 lb).

200-ST-1

Site Code: 200-E-5 Classification: Accepted

Site Names: 200-E-5, 2607-E2, 2607-E2 Septic Tank & ReClassification:

Tile Field

Site Type:Septic TankStart Date:1948Site Status:InactiveEnd Date:1997

Site The septic tank has three access ports. It is a single compartment 18,730 liter (4950 gallon)

Description: capacity tank with a 1900 liter (500 gallon) dosing siphon.

As of February 15, 2001, it was not marked in the field.

Waste Type: Sanitary Sewage

Waste The septic system serviced mobile office trailers that did not contain radioactive material.

Description:

Site Code: 200-E-6 Classification: Accepted

Site Names: 200-E-6, Septic Tank, Sanitary Sewer ReClassification:

Repair and Replacement 2607-E4

Site Type: Septic Tank Start Date: 1981

Site Status: Active End Date:

Site The septic tank is surrounded by chain with four steel posts painted yellow. The tank is posted

Description: with a septic tank sign. The tank has two 10 centimeter (4-inch) PVC pipes which protrude vertically from the ground. The sanitary tile field is surrounded with a steel post and chain

vertically from the ground. The samilary the field is surrounded with a steel post and chain

barricade and is posted with "Caution Underground Radioactive Material" signs.

Waste Type: Sanitary Sewage

Waste The site receives sewage from lavatory facilities within the 221-B Building.

Description:

Site Code: 200-E-7 Classification: Accepted

Site Names: 200-E-7, 2607-EO Septic Tank & Tile Field ReClassification:

Site Type: Septic Tank Start Date: 1994

Site Status: Active End Date:

Site The tank is part of the 2607-EP System. Current and proposed additions to this system bring its

Description: design daily flow to 20,440 liters (5400 gallons). The tank was pre-fabricated with a 1500 gallon

first chamber and a 1000 gallon second chamber. The associated septic field has been abandoned.

Waste Type: Sanitary Sewage

Waste

Description:

Site Code: 200-E-9 Classification: Accepted

Site Names: 200-E-9, 2607-EN, 2727-E Septic System, ReClassification:

2607-EN Septic Tank/Pump Station

Site Type:Septic TankStart Date:Site Status:ActiveEnd Date:

Site The above ground area is posted "Septic Tank 2607-EN". The area is surrounded with metal fence posts and chain. Three concrete and one PVC cylinders (manholes) with covers protructions.

fence posts and chain. Three concrete and one PVC cylinders (manholes) with covers protrude above grade in the underground tank area. The surface is disturbed and covered with Russian thistle, cheat grass, and other weedy species. Two "Sanitary Tile Field" signs are located south of

the septic tank.

Waste Type: Sanitary Sewage

Waste Sanitary sewage from 2727-E Safeguards and Security Building

Description: Reported Date: August 16, 1995

Site Code: 200-E-24 Classification: Accepted

Site Names: 200-E-24, 6607-11, 2704-HV Septic System ReClassification:

Site Type: Septic Tank Start Date:
Site Status: Active End Date:

Site The septic and dosing tank area (about 60 ft by 10 ft) has five manholes at grade and two 7-ft high

Description: 4-in diameter metal pipe air vents. The drainfield is within a fenced area about 300 ft north of the

septic tank area. The drainfield fenced area is about 130 ft by 360 ft; and has six valve boxes and a gate at the south end. The drainfield consists of three trenches and one trench reserved for future

use.

Waste Type: Sanitary Sewage

Waste This system receives sanitary sewage from 2704-HV, 2701-HV, MO723, MO850, MO046.

Description: Reported Date: 04-19-96

Site Code: 2607-E1 Classification: Accepted

Site Names: 2607-E1 ReClassification:

Site Type:Septic TankStart Date:1970Site Status:InactiveEnd Date:1997

Site This septic tank is constructed of reinforced concrete with walls and floors. The associated drain

Description: field is 778 square meters (8,376 square feet).

Waste Type: Sanitary Sewage

Waste This unit received sanitary wastewater and sewage at an estimate rate of 21,556 liters (5,695)

Description: gallons) per day.

Site Code: 2607-E1A Classification: Accepted

Site Names: 2607-E1A, 2607-E1A Septic System, L- ReClassification:

272 Regional System

1997 Septic Tank **Start Date: Site Type:**

Site Status: Active **End Date:**

The system includes a septic tank, a dosing chamber and a three section drain field. The area is Site

covered with gravel and marked appropriately. **Description:**

Waste Type: Sanitary Sewage

Waste The septic system receives sanitary waste with volumes up to 54,890 liters (14,500 gallons) per

Description:

2607-E3 **Classification:** Accepted **Site Code:**

2607-E3, 2607-E3 Septic Tank and **ReClassification: Site Names:**

> Drainfield, 2607-E3 Septic System, TFS of 218-E-4, Tile Field South of 218-E-4

Site Type: Septic Tank **Start Date:** 1948 **End Date:** 1997 **Site Status:** Inactive

Site The site is a septic tank and drainfield. It is surrounded with a chain and marked with a sign that

reads "Sanitary Sewer/Drain Field". **Description:**

> The septic tank is constructed of reinforced concrete. The tank is 8.7 meters (28 feet 8 inches) long, 2.7 meters (9 feet) wide, and 3.8 meters (12 feet 6 inches) deep (interior dimensions). The tank had a design capacity of 38,680 liters (10,220 gallons) based on a user capacity of 292 persons, a flow of 132 liters (35 gallons) of sewage per capita per day, and an average detention time of 1 day. The top of the tank is at the ground surface. The tank was accessed through three 0.9 meter (3 foot) manholes.

The drainfield is comprised of at least 712 meters (2,336 feet) of vitrified clay pipe or drain tile (at least 2.4 meters [8 feet] per capita). The laterals are open jointed and are spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste This site received sanitary wastewater and sewage from B Plant facilities at an estimated rate of **Description:**

509 cubic feet (14.4 cubic meters) per day. The septic tank was abandoned in 1997. No

information was provided related to sampling of the tank contents. DOE/RL-92-05 states that

the septic tank and tile field are not known to contain radioactive or hazardous waste.

The Following Sites Were Consolidated With This Site:

Site Code: TFS OF 218-E-4

TFS OF 218-E-4, Tile Field South of 218-E-4, 2607-E3 Tile Field **Site Names:**

Reason: **Duplicate Site**

Site Code: 2607-E4 **Classification:** Accepted

2607-E4, 2607-E4 Septic Tank and Tile **ReClassification: Site Names:**

Field

Septic Tank **Start Date:** 1963 **Site Type: Site Status:** Inactive **End Date:** 1998

The septic tank and tile field are marked with a Sanitary Sewer/Drain Field sign and lie with a Site **Description:**

posted Underground Radioactive Material area. The 2607-E4 Septic Tank is constructed of

reinforced concrete that drains to an adjacent tile field.

Waste Type: Sanitary Sewage

This septic tank received sanitary wastewater and sewage from B Plant facilities at an estimated Waste

rate of 0.24 cubic meters (8.5 cubic feet) per day. The tank was abandoned in 1998. No **Description:**

information was provided related to sampling.

Site Code: 2607-E5 Classification: Accepted

Site Names: 2607-E5 **ReClassification:**

Septic Tank **Start Date: Site Type: Site Status:** Active **End Date:**

Site **Description:** This septic system receives sanitary wastewater and sewage. This system includes a single compartment tank with a dosing system and a leaching trench. An abandoned tile field which was replaced by the sanitary leaching trench is also included with this site.

The construction details for the sanitary leach trench are contained in Hanford Drawing H-2-4602. The trench is 22.9 meters (75 feet) long, 1.5 meters (5 feet) wide at the bottom, and approximately 3.1 meters (10 feet) deep. The excavation had a 1.5:1 side slope. Three rows of 20 x 20 x 41 centimeter (8 x 8 x 16 inch) bond beam concrete blocks that run the entire length of the trench site on top of 0.6 meters (2 feet) of cobble fill. The trench was then covered with 0.3 meters (1 foot) of gravel, a polyethylene cover and backfilled with the centerline of the trench filled to 0.3 meters (1 foot) above the original grade. At the eastern end of the trench is a distribution box the received waste from the up gradient septic tanks and distributed it into the concrete block channels.

The following information was obtained from HW-22955, Hot Semiworks Manual Part 1:

All wastes from the 2704-C (Office and Gate House) and 2707-C (Change House) were considered sanitary waste and were disposed of separately from the chemical, or production waste. A 10.2 centimeters (4 inch) tile sewer ran from these buildings to a septic tank and tile field outside the Hot Semiworks exclusion area. The sewer ran parallel to and 20.7 meters (68 feet) south of the exclusion area north fence. The septic tank is 19.2 meters (63 feet) west of the exclusion area west fence.

The septic tank is a buried concrete settling tank 3.65 meters (12 feet) long by 1.8 meters (6 feet) long by 1.5 meters (5 feet) deep (inside dimensions). The bottom and walls are 20.3 centimeters (8 inches) thick. The top is 15.2 centimeters (6 inches) thick and has two .61 meter (24 inch) diameter manholes. The overflow is 1.18 meters (46.5 inches) from the bottom resulting in a holdup of 7948.5 liters (2100) gallons. The overflow from the septic tank drained to a tile field. This field consists of 6 runs of 10.2 centimeter (4 inch) tile each 15.2 meters (50 feet) long. The tile was laid with open joints in an 45.7 centimeter (18 inch) gravel bed .61 to .91 meters (2 to 3 feet) below grade

Waste Type: Sanitary Sewage Waste Description:

This system receives sanitary wastewater and sewage from the 209-E, the 2704-C, and the 2718-E Buildings at an estimated rate of 78 cubic feet (2.21 cubic meters) per day. Originally, the 2607-E5 tank serviced the 2707-C Change House. The change house had both a toilet and shower used by personnel working within the Hot Semiworks facilities. There may be a potential for radiological contamination within the 2607-E5, 2607-E7 (WIDS 2607-E7A), 2607-E (WIDS 2607-E7B), Sanitary Leaching Trench, or the Abandoned Tile Field.

Site Code: 2607-E6 Classification: Accepted

Site Names: 2607-E6 ReClassification:

Site Type:Septic TankStart Date:1953Site Status:InactiveEnd Date:1997

Site The site is a septic tank and drainfield. The drain field is surrounded by a wooden fence. The

Description: surface is vegetated with brush.

Waste Type: Sanitary Sewage

Waste The site received sanitary wastewater and sewage. The estimated rate of waste generation is

Description: 43.5 cubic meters per day.

Site Code: 2607-E7A Classification: Accepted

Site Names: 2607-E7A, 2607-E7 ReClassification:

Site Type: Septic Tank Start Date: 1963

Site Status: Active End Date:

Site This septic tank receives sanitary wastewater and sewage. This tank is a 1.7 meters (66 inches) **Description:** by 2.7 meters (105 inches) precast concrete septic tank with a single 61 centimeters (24 inch)

by 2.7 meters (105 inches) precast concrete septic tank with a single 61 centimeters (24 inch) diameter cover. The tank is inline with the 2607-E5 septic tank and the 2607-E (WIDS 2607-

E7B). The septic tank drains to the sanitary leaching trench.

Waste Type: Sanitary Sewage

Waste The 2607-E7A Septic System receives sanitary wastewater and sewage at an estimated rate of 58

Description: cubic feet (1.64 cubic meters) per day.

Site Code: 2607-E7B Classification: Accepted

Site Names: 2607-E7B, 2607-E7B Septic System, 2607- ReClassification:

E7

Site Type: Septic Tank Start Date: 1963

Site Status: Active End Date:

Site This septic tank receives sanitary wastewater and sewage. This tank is a 1.7 meters (66 inches)

Description: by 2.7 meters (105 inches) precast concrete septic tank with a single 61 centimeters (24 inch)

diameter cover. The tank is inline with the 2607-E5 septic tank and the 2607-E7 (WIDS 2607-

E7A). The septic tank drains to the sanitary leaching trench.

Waste Type: Sanitary Sewage

Waste The 2607-E7B Septic System receives sanitary wastewater and sewage at an estimated rate of 58

Description: cubic feet (1.64 cubic meters) per day.

Site Code: 2607-E8 Classification: Accepted

Site Names: 2607-E8, 2607-E8 Septic Tank and Tile **ReClassification:**

Field

Site Type:Septic TankStart Date:1953Site Status:InactiveEnd Date:1997

Site The septic tank surface is identified by two circular access ports surrounded with concrete. A

Description: sign, on the ground in April 2001, reads "2607-E8". The associated drain field had a capacity of

13,400 liters (3,533 gallons) per day.

Waste Type: Sanitary Sewage

Waste Septic Tank 2607-E8 receives sanitary wastewater and sewage at an estimated rate of 220 cubic

Description: feet (6.24 cubic meters) per day.

Site Code: 2607-E8A Classification: Discovery

Site Names: 2607-E8A, 2607-E8A Regional Septic **ReClassification:**

System

Site Type: Septic Tank Start Date: 1996

Site Status: Active End Date:

Site The septic system is surrounded with light posts and chain.

Description:

Waste Type: Sanitary Sewage

Waste

Description:

Site Code: 2607-E9 Classification: Accepted

Site Names: 2607-E9, 242B/BL Septic Tank ReClassification:

Site Type: Septic Tank Start Date: 1951

Site Status: Inactive End Date:

Site This 1,900-liter (500-gallon) septic tank received sanitary wastewater and sewage from the 242-B **Description:** and the 242-BL Buildings. This system has an associated drain field. It was abandoned and the

tank filled with sand. The site is in a contamination area.

A brief visit was made to the site in February 2000 to find the drainfield and to try to improve the mapping of the site. A "Drainfield" sign was found on the ground on the eastern side of the contamination area that surrounds the site. The former extent of the drainfield can be approximated using fence posts inside the contamination area (some of which still have chain attached), fallen chain on the ground plus the fence posts making up the eastern boundary of the contamination area. No access ports, lids or risers associated with the septic tank were visible. Evidence of the septic tank may have been obscured by tumbleweeds growing in the center of the

contamination area near the drainfield.

Waste Type: Sanitary Sewage

Waste The 2607-E9 Septic Tank received sanitary wastewater and sewage at an estimated rate of 0.71

Description: cubic feet (0.02 cubic meters) per day.

Site Code: 2607-E11 Classification: Accepted

Site Names: 2607-E11 ReClassification:

Site Type:Septic TankStart Date:1985Site Status:InactiveEnd Date:1997

Site This unit is a two-chamber tank. The tank has an associated drain field and a capacity of 3,500

Description: liters (927 gallons) per day.

Waste Type: Sanitary Sewage

Waste This system receives sanitary wastewater and sewage at an estimated rate of 835 gallons (3160 **Description:** liters) per day. The 2607-E11 system has been assigned a low Hazard Ranking System score;

therefore, it is unlikely to have chemical or radiological contamination present. There are no

sampling or inventory information available for this site.

Site Code: 2607-E12 Classification: Accepted

Site Names: 2607-E12, 2607-E12 Septic System ReClassification:

Site Type:Septic TankStart Date:Site Status:ActiveEnd Date:

Site The septic system consists of the old 5,000 gallon (18,927 liters) tank (the old drainfield was

Description: plugged off) that was converted to a dosing chamber when the new 10,000 gallon (37,854 liters)

septic tank was installed approximately 45 feet (13.7 meters) to the south. The trench-like drainfield for this system is located approximately 400 feet (122 meters) east of the tanks.

Waste Type: Sanitary Sewage

Waste Characteristics of the sanitary waste water from the 200 Areas are considered to be similar to

Description: residential sanitary waste. There are no known process or radioactive waste streams entering the

sanitary waste system.

Site Code: 2607-EA Classification: Accepted

Site Names: 2607-EA, 2607-EA Septic Tank and ReClassification:

Drywell

Site Type: Septic Tank Start Date: 1976

Site Status: Active End Date:

Site This unit includes a drain field.

Description:

Waste Type: Sanitary Sewage

Waste Sanitary wastewater and sewage. Estimated rate of waste generation is 0.06 cu m/d.

Description:

Site Code: 2607-EC Classification: Accepted

Site Names: 2607-EC ReClassification:

Site Type: Septic Tank Start Date: 1955

Site Status: Active End Date:

Site This unit includes a drain field. It is located inside the 241-A tank farm near the northeast corner.

Description:

Waste Type: Sanitary Sewage

Waste Sanitary wastewater and sewage. Estimated rate of waste generation is 0.45 cu m/d.

Description:

Site Code: 2607-EE Classification: Accepted

Site Names: 2607-EE, 2607-EE Septic System ReClassification:

Site Type: Septic Tank Start Date: 1956

Site Status: Inactive End Date:

Site The site is a septic tank with a drain field extending northeast of the septic tank. The area is

Description: surrounded with light duty posts and chain. One riser pipe is visible.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater and sewage from the PUREX facility. The source area is **Description:** in a potentially contaminated zone; therefore, the waste has the potential of being contaminated.

Site Code: 2607-EH Classification: Accepted

Site Names: 2607-EH, 2607-EH Septic System ReClassification: Rejected (5/31/2001)

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site WIDS site 2607-EH has been described as a septic tank and associated drain field.

Description:

Waste Type: Sanitary Sewage

Waste According to the Hanford Site Waste Management Units Report (Cramer, 1987), the 2607-EH **Description:** Septic System received sanitary wastewater and sewage from the 2101-M building at an

estimated rate of 1.36 cubic meters (48.00 cubic feet) per day.

Site Code: 2607-EK Classification: Accepted

Site Names: 2607-EK ReClassification: Closed Out (5/31/2001)

Site Type:Septic TankStart Date:1975Site Status:InactiveEnd Date:1997

Site The 2607-EK Septic Tank is a reinforced concrete tank and posted in the field as "Septic Tank Description: 2607EK." The associated drainfield is east of the tank. The drainfield is comprised of eleven

2607EK." The associated drainfield is east of the tank. The drainfield is comprised of eleven parallel runs of 15 centimeter (6 inch) perforated drain pipe. The runs are 27 meters (90 feet)

long and spaced 2.4 meters (8 feet) apart.

Waste Type: Sanitary Sewage

Waste The 2607-EK septic system received sanitary sewer effluent from the 2750-E Building at an

Description: estimated rate of 39.2 cubic meters (1,384 cubic feet) per day.

Site Code: 2607-EL Classification: Accepted

Site Names: 2607-EL, 2607-EL Septic Tank/Pump ReClassification:

Station

Site Type: Septic Tank Start Date:
Site Status: Active End Date:

Site The site is surrounded with steel posts and chain. It in marked with Septic Tank signs. Three access ports are visible on the surface. This septic tank/pump station is a part of the 2607-EP

System which was reconstructed in 1994. 2607-EL is permitted and approved by the Washington

Department of Health for a flow of 54, 890 liters per day.

Waste Type: Sanitary Sewage

Waste The waste is human sanitary sewage.

Description:

Site Code: 2607-EM Classification: Accepted

Site Names: 2607-EM ReClassification:

Site Type: Septic Tank Start Date: 1984

Site Status: Active End Date:

Site The 2607-EM Septic Tank is constructed of reinforced concrete and receives sanitary wastewater

Description: and sewage from the 2721-E Building. The system drains to the 2607-ED Drainfield.

Waste Type: Sanitary Sewage

Waste The 2607-EM septic system receives sanitary sewer effluent from the 2721-E Building at an

Description: estimated rate of 217 cubic feet (6.14 cubic meters) per day.

Site Code: 2607-EP Classification: Accepted

Site Names: 2607-EP ReClassification:

Site Type: Septic Tank Start Date: 1984

Site Status: Active End Date:

Site The 2607-EP System includes a septic tank and associated drainfield.

Description:

Waste Type: Sanitary Sewage

Waste The 2607-EP system receives effluent from the 2721-EA Building and MO-388 at an estimated

Description: rate of 28.30 cubic feet (0.80 cubic meters) per day.

Site Code: 2607-EQ Classification: Accepted

Site Names: 2607-EQ ReClassification:

Site Type: Septic Tank Start Date: 1985

Site Status: Active End Date:

Site The 2607-EQ Septic Tank is constructed of reinforced concrete. The associated drainfield is

Description: approximately 4,644 square feet (431 square meters).

Waste Type: Sanitary Sewage

Waste The 2607-EQ septic system receives sanitary sewage effluent at an estimated rate of 477 cubic

Description: feet (13.5 cubic meters) per day in 1987.

Site Code: 2607-ER Classification: Accepted

Site Names: 2607-ER ReClassification: Closed Out (5/31/2001)

Site Type:Septic TankStart Date:1980Site Status:InactiveEnd Date:1997

Site The 2607-ER system includes a septic tank and a trench type drain field. The tank has two access

Description: ports. As of February 20, 2001, it was not posted in the field.

Waste Type: Sanitary Sewage

Waste The 2607-ER septic system received sanitary sewage effluent from the MO-047, the MO-251, the MO-252, and the MO-253 at an estimated rate of 5,753 liters (1,520 gallons) per day.

Site Code: 2607-FSM Classification: Accepted

Site Names: 2607-FSM, 609 Building Septic Tank 2607- ReClassification:

FSM, 100 Area Fire Station Septic Tank,

1607-FSM, 6607-FSM

Site Type: Septic Tank Start Date: 1960

Site Status: Active End Date:

Site The 6607-FSM Septic Tank is a single-chamber, reinforced concrete tank. This unit includes a

Description: drainfield.

Waste Type: Sanitary Sewage

Waste The 2607-FSM septic system receives sanitary wastewater at a rate of approximately 550 gallons

Description: (2,082 liters) per week.

Site Code: 2607-FSN Classification: Accepted

Site Names: 2607-FSN, 609A Building Septic Tank

2607-FSN

ReClassification:

Site Type:Septic TankStart Date:1960Site Status:InactiveEnd Date:1988

Site The 2607-FSN Septic Tank and drainfield lie beneath an asphalt walkway and several trees.

Description:Waste Type:

Waste The 2607-FSN septic system received sanitary wastewater at a rate of approximately 1,250

Description: gallons (4,731 liters) per week.

Sanitary Sewage

Site Code: 2607-GF Classification: Accepted

Site Names: 2607-GF, 2607-GF Septic System, 2607- ReClassification: Rejected (5/31/2001)

GF Septic Tank and Drain Field

Site Type: Septic Tank Start Date:

Site Status: Inactive End Date:

Site WIDS site 2607-GF was described in Cramer (1987) as a septic tank and associated drain field.

Description: However, it likely does not exist.

Waste Type: Sanitary Sewage

Waste According to the Hanford Site Waste Management Units Report (Cramer, 1987), the 2607-GF

Description: Septic System is not currently in use. This unit received sanitary sewage effluent from the Dry

Materials Receiving and Handling Facility.

Site Code: 2607-N Classification: Accepted

Site Names: 2607-N, 212-N Septic Tank and Tile Field ReClassification:

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1952

Site The site is a septic tank and drain field. The tank is a rectangular, open-topped, concrete tank

Description: buried to grade level.

Waste Type: Sanitary Sewage

Waste The site received sanitary waste from the 2743-N Guard House.

Description:

Site Code: 2607-P Classification: Accepted

Site Names: 2607-P, 212-P Septic Tank and Tile Field ReClassification:

Site Type:Septic TankStart Date:1944Site Status:InactiveEnd Date:1952

Site The site is a septic tank and drain field. The tank is a rectangular, open-topped, soil filled

Description: concrete tank buried to grade level.

Waste Type: Sanitary Sewage

The site received sanitary waste from the 2743-P Guard House. The 910-liter (240-gallon) Waste

Description: septic tank appears to have been filled with soil.

Site Code: 2607-R **Classification:** Accepted

2607-R, 212-R Septic Tank and Tile Field **ReClassification: Site Names:**

Site Type: Septic Tank **Start Date:** 1944 **Site Status: End Date:** 1952 Inactive

The site is a septic tank and drain field. The tank is a rectangular, open-topped, concrete tank Site

buried to grade level. A field surveillance done in 1998 found the tank to be mostly filled in with **Description:**

soil.

Waste Type: Sanitary Sewage

The site received sanitary waste from the 2607-R Guard House. The 910-liter (240-gallon) Waste

Description: septic tank appears to have been filled with soil. An associated drain field exists.

200-W-34 **Site Code: Classification:** Rejected (Proposed)

Site Names: 200-W-34, 272-WA Septic System North **ReClassification:**

of 213W, 2607-WL, Duplicate of 2607-WL

Site Type: Septic Tank **Start Date: Site Status:** Inactive **End Date:**

This site is a duplicate of 2607-WL, which is also listed in WIDS as servicing the 272-WA Site

Building and being north of that facility. **Description:**

Waste Type: Sanitary Sewage

Waste **Description:**

200-W-51 **Site Code: Classification:** Accepted

200-W-51, Septic Tank (Abandoned) **ReClassification: Site Names:**

Site Type: Septic Tank **Start Date: Site Status:** Inactive **End Date:**

The site is an abandoned septic tank that has been filled and covered. The septic tank was Site **Description:**

discovered during excavations (for exhauster upgrades) outside 241-SY Tank Farm. The tank is

not marked or posted.

Waste Type: Sanitary Sewage

Waste The waste is the heel remaining in an abandoned septic tank.

Description:

Site Code: 2607-W1 **Classification:** Accepted

2607-W1 **ReClassification: Site Names:**

Septic Tank **Start Date:** 1944 **Site Type:**

Site Status: Active **End Date:**

Site The 2607-W1 Septic Tank is constructed of reinforced concrete and receives sanitary wastewater

Description: and sewage. There is a drain field associated with the system. This system was reconstructed in

1994.

Waste Type: Sanitary Sewage

The 2607-W1 septic system received sanitary sewer effluent at an estimated rate of 646 cubic Waste

Description: feet (18.3 cubic meters) per day in 1987.

Site Code: 2607-W2 **Classification:** Accepted

2607-W2 **Site Names: ReClassification:**

Septic Tank **Start Date:** 1980 **Site Type:** 1994 **Site Status:** Inactive **End Date:**

Site The 2607-W2 Septic Tank is surrounded by posts with no radiation warning signs. This system **Description:** was taken out of service and formally abandoned in 1994. The drainfield lines have been cut and

the septic tank was filled with soil. The drainfield had a capacity of 785 gallons (2,970 liters) per day. A gravity tie-line was installed to connect this small system to a collection that serves 2607-

W1.

Sanitary Sewage **Waste Type:**

The 2607-W2 septic system is currently inactive. This site was formally abandoned and filled Waste **Description:**

with soil in 1994. Prior to 1994, this unit received sanitary sewer effluent at an estimated rate of

360 cubic feet (10.2 cubic meters) per day.

Site Code: 2607-W3 **Classification:** Accepted

Site Names: 2607-W3 **ReClassification:**

Site Type: Septic Tank **Start Date:** 1944 1996 **Site Status:** Inactive **End Date:**

The 2607-W3 Septic Tank has been pumped, filled with sand and abandoned in place. The 2607-Site

Description: W3 Septic Tank was constructed of reinforced concrete. At one time, the eastern access was

posted with a Radioactive Material warning sign. This system includes a drain field that was

expanded in the 1950's.

Waste Type: Sanitary Sewage

The 2607-W3 septic system has been abandoned in place. This system has been redirected to Waste

Description: the 2607-W1 system. Prior to this, the 2607-W3 septic system received sanitary sewer effluent

at an estimated rate of 501 cubic feet (14.2 cubic meters) per day.

Site Code: 2607-W4 **Classification:** Accepted

2607-W4, T Plant Septic Tank and Drain **Site Names:**

Site Type: Septic Tank **Start Date:** 1944 **Site Status:** Inactive **End Date:** 1998

Site The 2607-W4 Septic Tank is a single compartment tank constructed of reinforced concrete. The

drain field measures 3.1 by 9.2 meters (10 feet by 30 feet). The site is surrounded by a light chain **Description:** barricade. At one time the area was marked with surface contamination warning signs. A site visit in October of 1998 indicates the area is no longer a Radiation Area. This system includes a drain

field and receives sanitary wastewater and sewage from the 221-T Canyon Building.

ReClassification:

Waste Type: Sanitary Sewage

Waste The 2607-W4 septic system received sanitary sewer effluent at an estimated rate of 1,330 gallons (5,000 liters) per day in 1995. This system received sanitary sewer effluent at an **Description:**

estimated rate of 374 cubic feet (10.6 cubic meters) per day in 1987.

2607-W5 **Classification:** Accepted **Site Code:**

Site Names: 2607-W5, Septic Tank and Drain Field **ReClassification:**

1944 **Site Type:** Septic Tank **Start Date:**

Site Status: Active **End Date:**

Site The 2607-W5 Septic Tank is a single-compartment tank constructed of concrete and has three **Description:**

entry openings on the top, each protected by a wooden cover. A pipe connects the septic tank to a concrete diversion box, and then to a second concrete diversion box before entering the

drainfield. The septic tank and diversion box are currently located within an "Underground Radioactive Material" area related to the 216-U-1, 216-U-2 cribs and the 241-U-361

stabilization. The drain field is located outside the URM area boundary. Only the south slope of

the drain field is inside the URM boundary.

Waste Type: Sanitary Sewage

Waste The 2607-W5 Septic System received sanitary sewer effluent at an estimated rate of 1,741 liters

(460 gallons) per day in 1995. This unit received sanitary sewer effluent at an estimated rate of **Description:**

12.2 cubic meters (431 cubic feet) per day in 1987.

2607-W6 **Site Code: Classification:** Accepted

2607-W6 **Site Names: ReClassification:**

Septic Tank **Start Date:** 1951 Site Type:

Site Status: Active **End Date:**

The 2607-W6 system was reconstructed in 1995. The unit has a sign correctly labeling it. A Site **Description:**

concrete structure with three metal manhole covers lies on the surface. The 2607-W6 Septic Tank

is constructed of reinforced concrete and receives sanitary wastewater and sewage.

Waste Type: Sanitary Sewage

The current daily flow rate for the 2607-W6 septic system is 9,300 gallons (15,100 liters). This Waste unit received sanitary sewer effluent at an estimated rate of 603 gallons (2,285 liters) per day in **Description:**

1995. This system received sanitary wastewater and sewage at an estimated rate of 1,230 cubic feet (34.8 cubic meters) per day in 1987.

2607-W7 **Site Code: Classification:** Accepted

2607-W7, Septic Tank **Site Names:** ReClassification:

Site Type: Septic Tank **Start Date:** 1954

Site Status: End Date: Inactive

Site The 2607-W7 Septic Tank was a small, 950 liter (350 gallon] tank constructed of reinforced concrete. Previous documentation stated the 2607-W7 Septic System includes a septic tank and **Description:**

drain field that lie within a radiation zone. A site visit done in 1999 found the septic tank to be located between two Underground Radioactive Material areas. The location of the drain field was

visually not apparent. HNF-SD-LL-SP-001 shows the drain field west of the septic tank.

Sanitary Sewage Waste Type:

No radionuclides or hazardous chemicals are associated with this system. The current flow rate Waste

to the 2607-W7 Septic System is unknown. However, this system received sanitary sewer **Description:**

effluent at an estimated rate of 1.02 cubic meters (36 cubic feet) per day in 1987.

Site Code: 2607-W8 **Classification:** Accepted

Site Names: 2607-W8 **ReClassification:**

Site Type: Septic Tank **Start Date:** 1944 **Site Status:** Inactive **End Date:** 1998

This system is located adjacent to posted radiation zone containing the 216-Z-5 and 216-Z-4 Site

cribs. The 2607-W8 Septic Tank is constructed of reinforced concrete and has three manhole **Description:**

covers visible on the surface. It is a single compartment tank with an attached dosing siphon. This

unit includes a tile field. The site is marked with a sign that read "Septic Tank - 2607-W8".

Waste Type: Sanitary Sewage

Waste Although the site is located within a posted radiological area and is associated with the 231-Z **Description:**

Building, DOE/RL-91-58 states that no radionuclides or hazardous chemicals have been

associated with this system. The 2607-W8 septic system received sanitary sewer effluent at an estimated rate of 5.015 liters (1.325 gallons) per day in 1992. The estimated rate was 5.45 cubic

meters (192 cubic feet) per day in 1987.

2607-W9 Accepted **Site Code: Classification:**

2607-W9, 2707-SX Septic Tank **Site Names: ReClassification:**

Start Date: 1950 Septic Tank Site Type:

Site Status: Inactive End Date:

Site A gravel surface covers the 2607-W9 Septic Tank and Tile Field. Two posts with a sun bleached

Description: sign mark the location of the tile field.

Waste Type: Sanitary Sewage Waste The current flow rate to the 2607-W9 septic system is unknown, However, this unit received sanitary sewer effluent at an estimated rate of 36 cubic feet (1.02 cubic meters) per day in 1987.

Site Code: 2607-WA Classification: Accepted

Site Names: 2607-WA ReClassification:

Site Type: Septic Tank Start Date: 1968

Site Status: Active End Date:

Site The 2607-WA septic system consists of two separate septic tanks and two separate drain fields.

Description: The septic tanks currently receive sanitary wastewater and sewage. This system was upgraded to

meet state requirements in 1994.

Waste Type: Sanitary Sewage

Waste The 2607-WA septic system received sanitary sewer effluent from the connected facilities. The **Description:** estimated rate of waste generation was 205 cubic feet (5.83 cubic meters) per day in 1987.

Site Code: 2607-WB Classification: Accepted

Site Names: 2607-WB, 2607-WB Septic System ReClassification: Closed Out (2/26/2001)

Site Type: Septic Tank Start Date:

Site Status: Inactive End Date: 1999

Site The site is a septic system that consists of three inactive septic tanks, one drain field, and the underground lines from connecting the tanks and drain field to the mobile offices they serviced.

Waste Type: Sanitary Sewage

Waste The system received sanitary waste from mobile offices outside of Z Plant.

Description:

Site Code: 2607-WC Classification: Accepted

Site Names: 2607-WC, 2607-WC Septic System ReClassification:

Site Type: Septic Tank Start Date: 1971

Site Status: Active End Date:

Site The 2607-WC Septic System consists of two tanks and a trench type drain field.

Description:

Waste Type: Sanitary Sewage

Waste The current flow rate to septic system 2607-WC is unknown. The 2607-WC system received

Description: sanitary waste at an estimated rate of 1,260 gallons (4,770 liters) per day in 1995.

Site Code: 2607-WL Classification: Accepted

Site Names: 2607-WL, 2607-WL Septic System ReClassification:

Site Type: Septic Tank Start Date: 1962

Site Status: Inactive End Date:

Site The 2607-WL Septic System is constructed of reinforced concrete. The septic system includes a

Description: trench-type drainfield. The septic tank and drainfield are surrounded by a chain barricade with a

sign stating "Septic Tank" posted.

Waste Type: Sanitary Sewage

Waste The current flow rates for the 2607-WL septic system indicate that the drain field is substantially **Description:** overloaded. In 1995, this unit received effluent from the associated structure at an estimated rate

overloaded. In 1995, this unit received effluent from the associated structure at an estimated rate of 2,760 gallons (10,450 liters) per day. The drain field has a capacity of 628 gallons (2,380

liters) per day.

Site Code: 2607-WWA Classification: Rejected (Proposed)

Site Names: 2607-WWA, 2607-WWA Septic System **ReClassification:**

Site Type: Septic Tank Start Date: 1955

Site Status: Inactive End Date:

Site This site does not exist as a separate site; it is likely an alias for 2607-WL.

Description:

Waste Type: Sanitary Sewage

Waste The 2607-WWA Septic System was reported by Cramer (1987) to have received sanitary sewer

Description: effluent at estimated rate of 3.41 cubic meters (120.4 cubic feet) per day. However, this report

is likely referring to 2607-WL.

Site Code: 2607-WZ Classification: Accepted

Site Names: 2607-WZ ReClassification:

Site Type: Septic Tank Start Date: 1944

Site Status: Inactive End Date:

Site The 2607-WZ Septic System includes a drain field. This unit lies within the fenced 200-West

Description: area.

Waste Type: Sanitary Sewage

Waste The current flow rates for the 2607-WZ Septic System are unknown. The system received sanitary sewer effluent at an estimated rate of 22.6 cubic meters (798 cubic feet) per day in 1987.

Site Code: 2607-Z Classification: Accepted

Site Names: 2607-Z ReClassification:

Site Type:Septic TankStart Date:1949Site Status:InactiveEnd Date:1999

Site The 2607-Z Septic Tank and drain field lie in a fenced area. The septic tank is constructed of

Description: concrete and is a two chamber tank. Three manholes are provided for personnel entry. The drain field measures approximately 59 meters (150 feet) in length and 110 meters (280 feet) in width,

located in an otherwise flat field.

Waste Type: Sanitary Sewage

WasteNo radionuclides or hazardous chemicals have been associated with this waste unit. Current flow rates indicate that the drain field is not providing adequate effluent treatment. This unit

flow rates indicate that the drain field is not providing adequate effluent treatment. This unit received sanitary sewer effluent at an estimated rate of 6,000 gallons (23,000 liters) per day in

1992.

Site Code: 2607-Z1 Classification: Accepted

Site Names: 2607-Z1, Septic Tank and Drainfield ReClassification:

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site The system (septic tank and drainfield) was constructed in 1958 and has been pumped once a

Description: week for the past few years. The drainfield location has been used as a laydown area in the past

and the underground laterals may have been damaged.

Waste Type: Sanitary Sewage

Waste The waste is sanitary sewage.

Description:

Site Code: 2607-Z8 Classification: Accepted

Site Names: 2607-Z8 ReClassification: Rejected (5/31/2001)

Site Type:Septic TankStart Date:Site Status:ActiveEnd Date:

Site WIDS site 2607-Z8 was described in Cramer (1987) as a septic tank and associated drain field.

Description: However, it likely does not exist.

Waste Type: Sanitary Sewage

Waste According to the Hanford Site Waste Management Units Report (Cramer, 1987), this unit **Description:** received sanitary sewer effluent at an estimated rate of 0.75 cubic meters (26 cubic feet) per day

in 1987.

Site Code: 600 ESST Classification: Accepted

Site Names: 600 ESST, 600 Area Exploratory Shaft ReClassification: Closed Out (5/31/2001)

Septic Tank, Septic Tank - Exploratory

Shaft

Site Type:Septic TankStart Date:1981Site Status:InactiveEnd Date:1988

Site This was the site of the Exploratory Shaft Facility septic tank. This area has been reclaimed due

Description: to project cancellation. No visual evidence of a septic tank remains.

Waste Type: Sanitary Sewage

Waste **Description:** The unit received sanitary wastewater.

Site Code: 600 NSTFST **Classification:** Accepted

Site Names:

600 NSTFST, 600 Area Near Surface Test

ReClassification: Closed Out (5/31/2001)

Facility Septic Tank, Septic Tank, Near

Surface Test Facility

Site Type: Septic Tank **Start Date:** 1981

Site Status: Inactive Site

End Date: 1988

Description:

This site is a septic tank and associated tile field. The septic tank serviced the Trailer Village that was located at the base of Gable Mountain. The septic tank was pumped out and backfilled.

Waste Type: Sanitary Sewage

Waste

The unit received sanitary wastewater.

Description:

Site Code: 600 NSTFUT **Classification:** Accepted

Site Names:

600 NSTFUT, 600 Area Near Surface Test Facility Underground Tank, Underground

ReClassification: Closed Out (5/31/2001)

Tank, Near Surface Test Facility

Site Type: Storage Tank **Start Date:** 1981

Site Status: Inactive

End Date: 1988

Site **Description:** This site consists of two sanitary waste holding tanks. The tanks supported the mobile office trailers that were located on the tunnel bench for the Near Surface Test Facility. The tanks each

had a 3,785-liter (1,000-gallon) capacity and were emptied every other week. This facility has

been decommissioned and reclaimed.

Waste Type: Sanitary Sewage

Waste

The tanks received sanitary wastewater.

Description:

Site Code: 600-212 Classification: Accepted

Site Names:

600-212, Relocatable Latrine Facility

ReClassification:

Holding Tank System

Septic Tank **Site Type:**

Start Date: 1993

Site Status: Active **End Date:**

Site **Description:** The site is surrounded with fourteen steel posts painted yellow. The top of the tank is visible at grade level and measures 9 feet by 15 feet. Two concrete covers a located on top of the tank, one

has a steel access port for pumping. The electrical conduit for transmitting to the alarm system is

visible on top of the tank.

Waste Type: Sanitary Sewage

Waste

Description:

Site Code: 600-217 Classification: Accepted

Site Names: 600-217, H-61-H Anti-Aircraft Artillery **ReClassification:**

Site Sewer System

Site Type:Sanitary SewerStart Date:Site Status:InactiveEnd Date:

Site Description:

The sewer system extends from the kitchen and toilet and shower buildings and ran into a septic tank on the eastern side of the site. The manholes and septic tank have been filled in with clean sand (September 2001). Twelve toilet drains and five floor drains were observed on the toilet and shower building foundation floor. A sewer manhole is located just NE of the toilet/shower building. The kitchen foundation has four floor drains and a grease trap. A sewer manhole is located NW of the kitchen.

A 34' x 37' x10' deep pit located in the northwest portion of the site was originally (1997) thought to have been used for sewage disposal, but the septic tank was subsequently located. The bottom of the pit is concrete and was once covered with wooden beams. Visibility of the pit is obscured by blown in tumbleweeds

Waste Type: Sanitary Sewage

Waste Description:

Site Code: 622-R ST Classification: Accepted

Site Names: 622-R ST, 622-R Septic Tank, 622-R **ReClassification:**

Atmospheric Physics Laboratory Septic

Tank

Site Type: Septic Tank Start Date: 1965

Site Status: Active End Date:

Site This site consists of a septic tank, distribution box, and tile field. A pump station was added in

Description: 1997 to reroute raw sewage to Septic System 6609-09. The septic tank was emptied and will

remain available as an emergency holding tank in case of pump failure.

Waste Type: Sanitary Sewage

Waste The unit receives sanitary wastewater.

Description:

Site Code: 6607-1 Classification: Accepted

Site Names: 6607-1, H-40 Gun Site Septic Tank ReClassification:

Site Type:Septic TankStart Date:1945Site Status:InactiveEnd Date:1958

Site This site includes a manhole located near the kitchen/mess hall and toi

This site includes a manhole located near the kitchen/mess hall and toilet/shower foundations and **Description:** a below ground concrete septic tank with three manholes. The manholes and the septic tank have

been backfilled with clean pit run material and are no longer visible, and the ground over the tank

is gravel as of June 2001.

Waste Type: Sanitary Sewage

Waste

The unit received unknown amounts of sanitary sewage.

Description:

Waste Type: Water

Waste

The tank contains water to a depth of 0.9 meters (3 feet).

Description:

Site Code: 6607-2 **Classification:** Accepted

6607-2, Gun Site H-42 Septic Tank **Site Names: ReClassification:**

Septic Tank **Start Date:** 1945 Site Type: **Site Status:** Inactive **End Date:** 1955

Site **Description:** This site includes a manhole, two septic tanks and connecting tile field. In May 2001, the open holes associated with the septic system were backfilled. The original manhole measured 71 centimeters (28 inches) diameter by 86 centimeters (34 inches) deep, with two inlet pipes, one outlet pipe and is constructed of cement bricks and mortar. The large septic tank is below grade and had three manholes and a concrete box structure visible above grade. The manholes were covered with concrete covers. The center manhole was broken providing visual access to the interior of the tank, prior to being backfilled. In 1997, the tank contained water. An above ground structure, located at the west end of the tank, appears to have been used as a pumping station to pump liquid to the smaller tank located to the west. The overall site dimensions of the large tank are 21 by 9 meters (70 by 30 feet). The small tank to the west measures 2.2 by 1.7 meters (7.3 by 5.8 feet) and has one covered manhole. The structures had been surrounded by orange plastic fencing, but the fencing was destroyed in the 2000 grass fire. The open features were backfilled in 2001.

Waste Type: Sanitary Sewage

Waste The unit received unknown amounts of sanitary sewage.

Description:

Waste Type: Water

Waste

The septic tank contained water at the time of the inspection.

Description:

Site Code: 6607-3 **Classification:** Accepted

Site Names: 6607-3, Anti-Aircraft Artillery Site H-51 **ReClassification:**

Septic Tank

Septic Tank **Start Date:** 1945 **Site Type: Site Status:** Inactive **End Date:** 1955

Description:

Site

The septic tank is constructed of concrete, has three open manholes and an above ground square concrete box-like structure located on the east end. This box-like structure may have been used to support a pump for pumping liquid to the drain field. The tank is below grade. The roped off section measures 17 by 4.6 meters (55 by 15 feet) and the tank interior is 3.4 meters (11 feet) deep. The drain field is located east of the septic tank. The septic tank and four manholes are

delineated by orange plastic fencing.

Waste Type: Sanitary Sewage Waste The unit received unknown amounts of sanitary sewage.

Description:

6607-5 **Site Code: Classification:** Accepted

6607-5, 616 Building Septic System **ReClassification: Site Names:**

1986 Septic Tank **Site Type: Start Date:**

Active **End Date: Site Status:**

Site The unit consists of a septic tank and a drain field. The septic tank is surrounded by four yellow

Description: posts and is covered by gravel. The drain field is surrounded by metal posts and chain. The drain

field is not marked by a sign.

Waste Type: Sanitary Sewage

The unit receives sanitary wastes from the 616 Building. Waste

Description:

TFS OF 218-E-4 **Site Code: Classification:** Accepted

Site Names: TFS OF 218-E-4, Tile Field South of 218-**ReClassification:**

E-4, 2607-E3 Tile Field

Site Type: Drain/Tile Field **Start Date:** 1944 1997 Inactive **End Date: Site Status:**

The tile field south of 218-E Burial Ground is comprised of vitrified clay pipe and drain tile. The Site

laterals of the tile field are open jointed and are spaced 7.9 feet (2.4 meters) apart. **Description:**

Waste Type: Sanitary Sewage

The 2607-E3 Septic Tank has received approximately 5.45 cubic meters (3,800 gallons) of Waste **Description:**

sanitary wastewater and sewage per day from the B Plant Aggregate Area Facilities. The waste

is discharged to the tile field located north of the 2706-E3 and South of the 218-E-4 Burial

Ground.

The Site Was Consolidated With:

Site Code: 2607-E3

Site Names: 2607-E3, 2607-E3 Septic Tank and Drainfield, 2607-E3 Septic System, TFS of 218-E-4, Tile

Field South of 218-E-4

Reason: **Duplicate Site**

200-SW-1

Site Code: 200 CP Classification: Accepted

Site Names: 200 CP, 200 Area Construction Pit, 200 **ReClassification:**

Area Construction Waste Site, Hanford Site

Gravel Pit 29

Site Type:Depression/Pit (nonspecific)Start Date:1945Site Status:InactiveEnd Date:1955

Site The site is a large, open gravel area. The pit is no longer being used.

Description:

Waste Type: Construction Debris

Waste Several truck loads of broken blocks of concrete foundations and other structures have been

Description: dumped into this gravel pit during the past several years. There have been no known chemicals

dumped into this unit.

Site Code: 200-E BP Classification: Accepted

Site Names: 200-E BP, 200-E Burning Pit, 200 East **ReClassification:**

Burn Pit

Site Type:Burn PitStart Date:1950Site Status:InactiveEnd Date:1970

Site The burn pit is a large depression. There is limited growing vegetation. The surface is mostly

Description: rock and gravel.

Waste Type: Chemicals

Waste This site received construction and office waste 1,500 cubic meters (1,960 cubic yards), paint

Description: wastes, and chemical solvents 1,000 cubic meters (1,300 cubic yards).

Waste Type: Asbestos (friable)

Waste A site visit in 1991 noted an area within the pit posted with asbestos warning signs.

Description:

Site Code: 200-E PAP Classification: Accepted

Site Names: 200-E PAP, 200-E Powerhouse Ash Pit and **ReClassification:**

Ash Disposal Pile, Ash Basin

Site Type:Inert/Demolition LandfillStart Date:1943Site Status:InactiveEnd Date:1998

Site The ash pit is a large open depression located east of the 284-E Powerhouse. The Ash Disposal **Description:** Pile is a large mound of material dredged, over years of operation, from the Ash Pit. In April

2000, Fluor Hanford gave permission to DynCorp to use the site as a demolition landfill.

Waste Type: Ash

Waste Description:

A waste determination of the Hanford Site 200 Area steam plant ash was performed in the early 1990s. The waste stream was determined to be nondangerous. Samples were analyzed using the TCLP (Toxicity Characteristic Leaching Procedure), and all were below the regulatory limits. Eleven sample results were also reported for pH: the results ranged from 7.66 to 11.91, with an average of 9.27. The second and third highest pH results were 10.09 and 9.94.

The rate of ash generation was approximately 9,480 cubic yards per year (7252 cubic meters per year). The pit held approximately 81,020 cubic yards (61980 cubic meters) of ash.

Site Code: 200-E-1 Classification: Accepted

Site Names: 200-E-1, 284E, 284-E Landfill ReClassification:

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site There is no visible evidence of a landfill at this location. A covered concrete pad has been built

Description: over the area where the landfill was supposed to be located.

Waste Type: Asbestos (friable)

Waste The waste at this unit consists of asbestos.

Description:

Site Code: 200-E-2 Classification: Accepted

Site Names: 200-E-2, Soil Stains at the 2101-M SW **ReClassification:**

Parking Lot, MO-234 parking Lot

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site was originally described as a gravel covered parking lot that contains discolored soil.

Two large dark circular stains are visible in front of the access ramp at the south end of MO-234.

During a site visit on August 12, 1999, it was observed that the discolored soil is primarily concentrated at the north end of the parking lot. Large areas of discolored soil are found just south of MO234 and east of MO413. The stains extend for most of the length of these two mobile offices. Smaller stains are found throughout the lot, which is currently in use. The parking lot is fairly level but is lower than either Baltimore (to the east) or 2nd Street (to the south). The site is covered with gravel and no debris or vegetation are visible. Two storm drains are visible in the lot (miscellaneous streams 709 and 710). The drain at the north end of the lot is slightly depressed relative to the surrounding area and is surrounded by the large stained areas. The second storm drain is near the south end of the lot, east of MO021. It is also slightly depressed relative to the surrounding area, but is away from the highly stained portion of the lot.

Waste Type: Oil

Waste Description:

The unit waste includes used oil for dust abatement. BHI Regulatory Support (B. Vedder) had two concerns about the site. Polychlorinated biphenyls (PCBs) were the biggest concern and heavy metals of lessor concern. PCBs were common in high heat grade hydraulic fluids. Unless there is some strong evidence that only used vehicle motor oil was applied, this site will need to be sampled to verify that there is no PCB contamination.

Site Code: 200-E-3 Classification: Accepted

Site Names: 200-E-3, Toluene Dump Site, 200-E-10 ReClassification:

Paint/Solvent Dump

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The unit consists of a borrow pit. The bottom of the borrow pit has "hard pan" type soil in the bottom, while the sides are gravel and sand. There is no visual evidence of the dumping.

Waste Type: Chemicals

Waste The unit waste included toluene, solvents, and MEK that had been dumped in the borrow pit.

Description:

The Site Was Consolidated With:

Site Code: 200-E-10

Site Names: 200-E-10, Paint/Solvent Dump South of Sub Trenches, 200-E-3 Toluene Dump Site

Reason: Duplicate side codes for the same site.

Site Code: 200-E-10 Classification: Accepted

Site Names: 200-E-10, Paint/Solvent Dump South of ReClassification:

Sub Trenches, 200-E-3 Toluene Dump Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site A site visit in 1997 identified a large gravel depression north of 241-AN Tank Farm. The area is

Description: not marked or posted. There is no visual evidence to confirm the dumping location.

Waste Type: Chemicals

Waste The waste included paint related products such as toluene, solvents and MEK.

Description:

The Following Sites Were Consolidated With This Site:

Site Code: 200-E-3

Site Names: 200-E-3, Toluene Dump Site, 200-E-10 Paint/Solvent Dump

Reason: Duplicate side codes for the same site.

Site Code: 200-E-12 Classification: Accepted

Site Names: 200-E-12, Sand Piles from RCRA General ReClassification: Rejected (1/19/2000)

Inspection 200EFY95 Item #5

Site Type: Laboratory Start Date:
Site Status: Active End Date:

Site A 1995 site inspection discovered this site and described it as two sandy areas which are a

Description: different color sand than the surrounding sand. The two sand piles were approximately 27 meters

(30 yards) apart.

During a February 1997 visit, an empty, stainless steel tank and a nearby pit were also observed at the site. The tank, labeled "X-12," measured 1.47 meters (58 inches) high and 1.35 meters (53 inches) in diameter. The area has been roped off with steel posts and rope. The sandy areas were approximately 3.7 meters (4 yards) in diameter.

The site was visited again on August 26, 1998, for a GPS survey. The two sand piles appeared to have been removed; only traces of the piles remained. Between the remains of the two sand piles were equipment for some sort of experiment. A small pit with deteriorated clear plastic was observed by the "X-12" tank. The experiment equipment consisted of two large polypropylene water tanks, a large rectangular pit and a metal frame set up over the pit. One of the tanks was 2.7 to 3.0 meters (9-10 feet) tall with a 2840 liter (750 gallon) capacity. It was labeled "Non Hazardous River Water" and appeared to be approximately half full. The second water tank was only about 1.5 meters (5 feet) tall and had a larger diameter than the first tank. It was also labeled "Non Hazardous River Water" and appeared to be approximately three-quarters full. There were no volume markings on this tank. The shorter tank was also posted "Experiment in Process, Contact Ray Clayton @ 372-6037." The rectangular pit was approximately 4.6 meters (15 feet) long and 1.5 meters (5 feet) wide and 0.9 meters (3 feet) deep. The bottom of the pit was covered with a tarp and the sides appeared to be covered with plywood. Over the top of the pit was a metal frame suspending a spray device over the pit.

The site was revisited on July 26, 1999, in order to confirm the current conditions of the site. The "X-12" tank is still there, sitting on a wooden pallet. The small pit with the deteriorated plastic is there and looks unchanged. The two large polypropylene tanks observed in 1998 are gone. The space where they had been located was occupied by wood debris and PVC pipe. The large rectangular pit has been filled in. What appears to have been the metal frame over the former pit is now lying on the ground to the north.

A cylinder of compressed nitrogen is within 2 meters (6.6 feet) of the south sand pile remnant. The cylinder is labeled "For Research Use. Please do not move from this site. POC Fenton Khan 372-0426 or Janelle Downs 376-6641." The cylinder is resting on a metal plate and is secured to a metal post. This cylinder is the only material that is part of an ecological experiment for the vitrification project, and is separate from the other material found at the site.

Site Code: 200-E-13 Classification: Accepted

Site Names: 200-E-13, Rubble Piles from RCRA **ReClassification:**

General Inspection #200EFY95 Item #7

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site A 1995 site inspection identified this site and described it as numerous rubble piles. These piles Description: contained inert construction debris, such as wood, asphalt, dirt, pipe and concrete.

Another site visit occurred in February 1997. The following debris was identified: asphalt paving, concrete, steel pipe, rebar and PVC pipe.

During a GPS survey on August 26, 1998, it was observed that debris was concentrated in piles south of an old borrow area. However, there were also isolated piles/berms of debris beyond this concentration, primarily to the west. Some scattered debris and half-buried towels or rags were observed in the borrow area.

A site visit on July 26, 1999, confirmed the previous site conditions.

Waste Type: Construction Debris

٠.

The waste contains inert construction debris that includes wood, asphalt, dirt, pipe, and concrete.

Description:

Waste

Site Code: 200-E-46 Classification: Accepted

Site Names: 200-E-46, RCRA Permit General

Inspection #200EFY96 Item #3

ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description

The site appears to be an old lay down area. Scattered debris is visible over a large area.

Description:

Waste Type: Misc. Trash and Debris

Waste Materials observed at the site include wire rope, a steel railroad rail, a metal bar, wood,

Description: fiberglass insulation.aluminum cans coal, pipe, aluminum wire, copper wire, concrete, and glass.

Most of the debris is in relatively small pieces. Large debris include the steel railroad rail, iron

bar, wire rope, and concrete.

Site Code: 200-E-47 Classification:

Site Names: 200-E-47, RCRA Permit General

Inspection #200EFY96 Item #7

ReClassification: Rejected (5/31/2001)

Accepted

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site is a small pile of scrap steel angle iron, sheet metal, and piping, discovered during an

Description: annual RCRA General Inspection July 15 -16, 1996. The surrounding area is covered with

tumbleweeds, cheatgrass, and sagebrush. However, the soil on top of the metal is bare, due to the

inability of vegetation to grow on the very shallow soils covering the metal.

Waste Type: Misc. Trash and Debris

Waste Steel beams and piping.

Description:

Site Code: 200-E-48 Classification: Rejected (5/31/2001)

Site Names: 200-E-48; RCRA Permit General **ReClassification:**

Inspection #200EFY96 Item #15

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is an abandoned steel I beam is 9 meters (30 feet) long and 0.3 meters (1 foot) wide. The

Description: site is not marked or posted.

Waste Type: Equipment

Waste The site is a 9 meter (30 foot) long steel I beam.

Description:

200-E-52 **Site Code: Classification:** Accepted

200-E-52, 200 East Powerhouse Coal Pile **ReClassification: Site Names:**

Start Date: 1944 **Site Type:** Depression/Pit (nonspecific) **Site Status:** Inactive **End Date:** 1998

Site Only a shallow surface covering of coal remains at the site. On the east and south banks there are

Description: large pieces of metal debris (I-beam, metal grate). A coal-covered metal plate covers the chute to

the conveyor belt.

Misc. Trash and Debris Waste Type:

While no known hazardous materials are at the site, a layer of coal and coal dust remains on the Waste surface of the area. A few pieces of metal debris are located at the east end of the coal storage **Description:**

area. A waste determination for Anthracite (Anthrafilt) was performed in 1994. A waste determination for bituminous coal dust was performed in 1996. Both waste streams were

determined to be nondangerous.

Site Code: 200-E-122 **Classification:** Accepted

200-E-122, Construction Forces Bullpen, **ReClassification: Site Names:**

CF Bullpen, Equipment Storage Yard

Site Type: Start Date: Storage **End Date: Site Status:** Active

The site is an equipment/material storage yard that is enclosed in a locked, chain link fence. The Site **Description:**

fence is marked Radiological Buffer Area. Inside the fence, several groups of material are

surrounded with radiation rope and marked with Contamination Area signs. Some of the material inside the fence includes, scaffolding, barrels, wood, scrap metal, wooden crates, tables and

cabinets.

Waste Type: Equipment

Radioactive contaminated material is stored inside the fenced area. Waste

Description:

Site Code: 218-E-6 **Classification:** Accepted

218-E-6, B Stack Shack Burning Pit, **ReClassification:** No Action (1/19/2000) **Site Names:**

Buried Contamination

Burial Ground Start Date: Site Type: 1955

Site Status: Inactive **End Date:** 1955

Site The site is no longer marked or posted

Description:

Waste Type: Demolition and Inert Waste

Waste According to the documentation, no waste remains at this site. **Description:**

> In 1955, contaminated wooden forms, a shack and other wooden items were placed into a 1.2meter (4-foot) deep trench and burned. The ashes were backfilled with dirt and the area was

marked with "Underground Contamination" signs.

In 1971, the site was excavated to a depth of 1.2 meters (4 feet). A radiological survey was done on the ashes and partially burned wood. No radiological contamination was found. The site was released from Radiation Zone status. Stenner et al. (1988) report that the site has been exhumed and the contents removed to a 200 East Area burial ground.

200-N-3 **Site Code: Classification:** Accepted

Site Names: 200-N-3, Ballast Pits **ReClassification:**

Depression/Pit (nonspecific) **Site Type: Start Date: Site Status:** Inactive **End Date:**

Several pits are located southwest of the 212-P building. Each pit is approximately 12 meters Site across. The soil contains a large amount of gravel sized rock. The site is not marked or posted. **Description:**

Waste Type: Misc. Trash and Debris

Waste A 1992 site visit indicated electrical conduit and mechanical parts were visible in the bottom of **Description:** the pits. A 1996 site visit found only a small amount of metallic debris in the bottom of one pit.

Site Code: 200-W ADB **Classification:** Accepted

200-W ADB, 200-W Ash Disposal Basin **ReClassification: Site Names:**

Coal Ash Pit **Start Date:** 1944 **Site Type:** 2000 **Site Status:** Inactive **End Date:**

Site

The site currently is an area of dark soil with cheatgrass growing on the surface. The site had been **Description:** a large, irregularly shaped excavation that has since been filled to the top surface of the

excavation with material from the 200 West Area Powerhouse operation.

During a February 2001 site walkdown, a fenced, but unmarked ditch was found adjacent to the ash disposal basin. Coordinates of the southwest corner of the ditch, collected from a hand-held Global Positioning Survey (GPS) unit, are N135593.18, E567929.73. The ditch, adjacent to the gravel access road, was filled with blown-in tumbleweeds. A barrier, made of metal fence posts and a light chain, may have been place there for safety reasons.

Waste Type: Ash

Waste The site received coal ash from the 200 West Area Powerhouse operation.

Description:

200-W BP **Site Code: Classification:** Accepted

200-W BP, 200-W Burning Pit, Pit 34 **Site Names: ReClassification:**

Site Type: Burn Pit **Start Date:** 1950 **Site Status:** Inactive **End Date:** 1970

Site The site is a large open pit.

Description:

Waste Type: Chemicals Waste Description:

The unit was used to burn nonradioactive material. The site received construction and office waste (15,000 cubic meters [19,600 cubic yards]), paint waste, and chemical solvents (1,000

liters [260 gallons]).

Site Code: 200-W CSLA Classification: Accepted

Site Names: 200-W CSLA, 200-W Construction Surface ReClassification: Rejected (1/19/2000)

Laydown Area, Non-Rad Burial Ground,

Construction Surface Laydown Area

Site Type:Dumping AreaStart Date:1945Site Status:InactiveEnd Date:1950

Site The site is an old construction laydown area. The laydown area is not marked. The 216-U-17

Description: Crib is located at the northwest corner of this location. A 1997 site visit also noted the 200-UP-1

Groundwater Pump and Treat facility in the northwest portion of this location. There was evidence of scattered miscellaneous debris on the surface of the vacant area south and east of the 216-U-17 crib. In 1997, construction of the new Cross-Site Transfer Line was occurring nearby.

Waste Type: Misc. Trash and Debris

Waste This site was used to dispose of unusable valves, piping, and other plumbing materials. Angle **Description:** iron, crushed cans and drums, rusty wire and metal frames were noted on the surface in 1997.

Site Code: 200-W PAP Classification: Accepted

Site Names: 200-W PAP, 200-W Powerhouse Ash Pit **ReClassification:**

Site Type:Inert/Demolition LandfillStart Date:1943Site Status:InactiveEnd Date:1995

Site The pit is a rectangular, open hole, approximately 7.6 meters (25 feet) deep.

Description:

In February 2000, the site was empty and dry. As of April, 2000, the unit is a deep pit with steep sloped sides. It is surrounded with a light chain and posted with "Danger-Open Pit" signs. A

layer of ash remains on the floor of the pit.

Waste Type: Ash

Waste Description:

A waste determination of the Hanford Site 200 Area steam plant ash was performed in the early 1990s. The waste stream was determined to be nondangerous. Samples were analyzed using the TCLP (Toxicity Characteristic Leaching Procedure), and all were below the regulatory limits. Eleven sample results were also reported for pH: the results ranged from 7.66 to 11.91, with an average of 9.27. The second and third highest pH results were 10.09 and 9.94.

The rate of ash generation was approximately 8,890 cubic yards per year. The pit held

approximately 57,290 cubic yards of ash.

Site Code: 200-W-1 Classification: Accepted

Site Names: 200-W-1, REDOX Mud Pit West **ReClassification:**

Site Type: Mud Pit Start Date:

Site Status: Inactive End Date:

Site Description:

The site was originally described as a pit that is approximately 15.3 meters (50 feet) by 31 meters (100 feet). The surface of the area has the appearance of drilling mud, and has the typical surface that is left from evaporated or percolated liquid. Vegetation is absent from the area.

The following observations were made during a field visit in August 1999. The site is in a shallow depression. It is difficult to discern the precise boundaries of the site because the general area appears to have been disturbed by heavy equipment. One section of the site is devoid of vegetation and appears to have some soil discoloration. West of this section is an area where the ground surface is broken up and sparsely vegetated. These two distinctive areas are surrounded by sparse to moderate vegetation cover, composed primarily of cheatgrass and tumbleweeds. An approximately 2.5 centimeter (1 inch) diameter rubber hose was seen near the west edge of the site and some lumber and a wooden stake were found at the unvegetated spot.

Waste Type: Chemicals

Waste Site characterization is required for this site.

Description:

Site Code: 200-W-2 Classification: Accepted

Site Names: 200-W-2, REDOX Berms West ReClassification:

Site Type:Spoils Pile/BermStart Date:Site Status:InactiveEnd Date:

Site Description:

The majority of the area is level, with evidence of soil disturbance over several acres. The site consists of two bermed areas. One berm is approximately 1.5 meters (5 feet) high by 9.2 meters (30 feet) wide. The other berm is approximately 3.1 meters (10 feet) high and 15.3 meters (50 feet) wide. The berms are not marked or posted.

Waste Type: Soil

Waste The wastes at this unit are unknown. Characterization studies need to be performed.

Description:

Site Code: 200-W-3 Classification: Accepted

Site Names: 200-W-3, 2713-W North Parking Lot, 220- **ReClassification:**

W-1

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The unit is a parking lot, containing an area with discolored soil approximately 10 to 15

Description: centimeters (4 to 6 inches) deep.

Waste Type: Oil

WasteThe waste at the unit includes waste oil that was used for dust abatement. Two soil samples taken at the unit indicate that PCBs (maximum 3 parts per million), lead (maximum 2.1

milligrams per liter EP-TOX), xylene (maximum 1640 parts per billion), and total petroleum

hydrocarbons (maximum 620 milligrams per kilograms) were present.

Site Code: 200-W-4 Classification: Accepted

Site Names: 200-W-4, U-Farm Landfill ReClassification:

Site Type: Burial Ground Start Date: 1992

Site Status: Inactive End Date:

Site The unit was a small trench excavation containing a yellow paint-like substance. The area is not

Description: marked and is no longer visible from the surface.

Waste Type: Chemicals

Waste The unit waste includes lead, chromium and cadmium. It was assumed to be dried, yellow paint.

Description:

Site Code: 200-W-6 Classification: Accepted

Site Names: 200-W-6, 200-W Painter Shop paint ReClassification:

solvent disposal area

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The Kaiser Paint Shop building is located on top of the contaminated soil. The contaminated soil

Description: was discovered in 1993, while performing building modifications at the paint shop.

Waste Type: Chemicals

Waste Paint solvents were routinely disposed of to the soil in this area prior to 1984, according to

Description: conversations with "old timers".

Site Code: 200-W-10 Classification: Accepted

Site Names: 200-W-10, Item 10 (RCRA General ReClassification:

Inspection), Grout Wall Test

Site Type: Depression/Pit (nonspecific) Start Date: 1976
Site Status: Inactive End Date: 1977

Site Field personnel originally observed a pit covered to grade with wood timber/planking. It was

Description: surrounded by orange plastic fencing on steel posts with 2 signs (one "Danger Keep Away" the other "Controlled Area"). Outside/adjacent to fencing area 2-in (5 cm) diameter metal pipes

upright/above grade at heights ranging from 18 in to 3 1/2 ft (0.45 to 1.05 m). Debris of wire, metal & wood were present. The area surrounding is approximately level and just west of the end

of the dirt road.

Waste Type: Chemicals

Waste 11,578 L (3059 gal) sodium silicate, 2,467 L (652 gal) formamide, 20.2 kg (44.5 lb) calcium

Description: chloride

Site Code: 200-W-11 Classification: Accepted

Site Names: 200-W-11, Concrete Foundation South of ReClassification:

241-S, S-Farm Foundation and Dump Site

Dumping Area Start Date: Site Type:

End Date: Site Status: Inactive

A concrete foundation, small burn areas, bare areas and scattered debris are located south of 241-Site

Description: S Tank Farm.

Misc. Trash and Debris Waste Type:

Waste concrete foundation, small burn areas, bare areas, scattered debris (wire, weld rod, paint cans, oil **Description:**

cans, solvent cans, vehicle parts, cable, melted roofing material, glass, wood, pipe, rubber brick,

metal, concrete)

Reported Date: April 4, 1995

Site Code: Classification: Accepted 200-W-12

Site Names: 200-W-12, 201-W Soil Mound and Plastic **ReClassification:**

Pipe

Start Date: Site Type: Dumping Area End Date: Site Status: Inactive

The site consists of a soil mound with one 0.76-meter (2.5-foot) above-ground plastic pipe and Site

one 20-centimeter (8-inch) above-ground plastic pipe topped with tees and elbows. There are **Description:**

also insulated electrical wires and an electrical heat controller.

Waste Type: Equipment

Waste The site consists of a soil mound (about 0.3-meter [1-foot] above grade) with one 0.76-meter **Description:**

(2.5-foot) above ground poly pipe and one 20-centimeter (8-inch) above ground poly pipe

topped with tees and elbows. The site includes insulated wire and a heat controller. A below

ground tank is suspected but unverified.

Site Code: 200-W-17 **Classification:** Accepted

200-W-17, S-Plant Project W-087 **ReClassification: Site Names:**

Aluminum Silicate Discovery

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

The pipe trench where white aluminum silicate was found has been back-filled to grade. A single, Site

unmarked, steel post marks the location of the excavation. There is no visual evidence of **Description:**

aluminum silicate on the surface.

Waste Type: Chemical Release

Waste The waste associated with this site was aluminum silicate. The aluminum silicate is probably

Description: from drilling mud.

Site Code: 200-W-18 **Classification:** Accepted

Site Names: 200-W-18, S-Plant Project W-087 **ReClassification:**

Aluminum Oxide Discovery

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The pipe trench where the aluminum oxide was found has been backfilled with soil. A single,

Description: unmarked, steel post marks the location of the excavation. There is no visual evidence of

aluminum oxide on the surface.

Waste Type: Abandoned Chemicals

Waste The sample collected from this site was aluminum oxide and calcium. The aluminum oxide is

Description: probably from drilling mud

Site Code: 200-W-33 Classification: Accepted

Site Names: 200-W-33, Solid Waste Dumping Area **ReClassification:**

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site consists of an area of debris covering approximately one acre in a stand of open

Description: sagebrush.

Waste Type: Misc. Trash and Debris

Waste Numerous empty, rust cans and barrels were found. One five gallon can was found that **Description:** Contained an oil substance. Other types of miscellaneous debris included tires, bottles and oil

cans. There is evidence of burning in the area.

Site Code: 200-W-35 Classification: Accepted

Site Names: 200-W-35, Various sites north of 201-W, **ReClassification:**

200-W-35-A Infiltration Test Site, 200-W-35-B Bentonite Slurry Test Site, 200-W-35-

C Buried Garbage Can with Lid

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site During the late 1970's and early 1980's, this area was used for testing various technology developments. A 1995 Site Investigation visually identified a shallow excavated area, a pit

covered with plywood, and a vertically buried garbage can with the lid at ground surface level. The sites are no longer visible because they were backfilled in 1997. They are not marked or

posted.

Waste Type: Equipment

Waste Description:

SubSites:

SubSite Code: 200-W-35:1

SubSite Name: 200-W-35:1, 200-W-35-A Infiltration Test Site

Classification: Accepted

ReClassification:

Description: The site is a shallow excavation located east of the dirt road north of 201-W. It is

approximately 10 by 20 meters (30 by 60 feet). A site visit in 1995 identified some aluminum pipes laying around the area. W.H. Price states that the site was used as an Infiltration Test

Site to determine the infiltration capacity of new cribs prior to their construction.

SubSite Code: 200-W-35:2

SubSite Name: 200-W-35:2, 200-W-35-B, Bentonite Slurry Test Site

Classification: Accepted

ReClassification:

Description: The Bentonite Slurry Test Site is located on the east side of the dirt road north of 201-W

about half way between 201-W and the end of the road. It is a pit covered with a plywood cover and a circular hole cut in the plywood. W.H. Price states the site was used to develop a tool to sample the 361-Z Tank. Three drums were welded together and filled with a thick bentonite slurry and food coloring to simulate the contents of the 361-Z Tank. The test principal investigator (C.T. Webster) stated that no hazardous or radioactive materials were

used in the test. This pit was backfilled with clean dirt on June 20, 1997.

SubSite Code: 200-W-35:3

SubSite Name: 200-W-35:3, 200-W-35-C, Buried Garbage Can with Lid

Classification: Accepted

ReClassification:

Description: The buried garbage can is located east of the dirt road north of 210-W and west of the

Bentonite Slurry Test Pit. It was not marked or posted. Conversations with W.H. Price, Ray Giddings and Steve Phillps did not reveal any information about its use. The Garbage Can

was backfilled with clean dirt on June 20, 1997.

Site Code: 200-W-41 Classification: Accepted

Site Names: 200-W-41, Abandoned Drums ReClassification:

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1999

Site In August 1996, the site was described as a single 190-liter (50-gallon) carbon tetrachloride drum

Description: and two 114-liter (30-gallon) Trysben (herbicide) drums. The drums showed no evidence of

contaminating the surrounding soil. A hole was observed near the bottom of the carbon tetrachloride drum. A site investigation done in September 1996 found only two drums at this location. The 114-liter (30-gallon) Trysben weed killer drum was in good condition and was

completely sealed. The drums were removed in September 1999.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The waste consisted of empty drums, removed in 1997. There was no evidence of leakage from

Description: the drums, and no stained soil under them. .

Site Code: 200-W-55 Classification: Accepted

200-W-55, Dumping Area North of 231-Z **ReClassification: Site Names:**

Site Type: Dumping Area Start Date: Inactive **Site Status: End Date:**

Site An area of debris was identified during a 1997 RCRA Permit General Inspection tour. The site is

Description: a pile of debris approximately 10 feet in diameter inside the north end of a large depression. The site consists of concrete rubble, wood, cans, pipes and rusted sheet metal. The site is not marked

or radiologically posted.

Waste Type: Misc. Trash and Debris

Waste **Description:**

Site Code: 200-W-56 **Classification:** Accepted

Site Names: 200-W-56, Debris North of 221-U **ReClassification:**

Site Type: **Dumping Area Start Date: Site Status:** Inactive **End Date:**

Site An area of debris was identified during a 1997 RCRA Permit General Inspection tour. The site **Description:** consists of a pile of dirt approximately 10 feet in diameter containing wire, fencing material, metal

scrap, cable and grounding rods. The site is not marked or radiologically posted.

Waste Type: Misc. Trash and Debris

Waste Debris includes wire, fencing material, metal scrap, cable and grounding rods.

Description:

Site Code: 200-W-57 **Classification:** Rejected (Proposed)

Site Names: 200-W-57, Excess Equipment Laydown (T **ReClassification:**

> Hopper) Area from RCRA General Inspection #200WFY97 Item #10, Area

West of 2714-U Fence

Dumping Area Start Date: Site Type: Site Status: Inactive **End Date:**

Site

The site was an excess equipment laydown area, outside the fenced 2714-U facility. The **Description:** equipment staged outside the fence was not radiologically contaminated. A RCRA General

Inspection identified the material as an area needing to be addressed. During the RCRA field inspection on October 8, 1997, the site was discussed with Bill Osborne and Dave Baker of ERC. The equipment was in the process of being salvaged and or recycled by a junk dealer. The

material has now been removed and the area is now just gravel and pavement.

Waste Type: Equipment

The waste included electric motors, miscellaneous piping, heavy equipment parts, metal screen, Waste **Description:** wood, fiberglass vessels, an open steel tank, and scaffolding. There does not appear to be

material that could be considered a dangerous waste in the area.

Site Code: 200-W-62 **Classification:** Accepted Site Names: 200-W-62, 200 West Powerhouse Coal Pile ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date:

Site Status: Inactive End Date: 1995

Site The ground surface is covered with remnants of coal. Very little vegetation is growing, only small

Description: tumbleweeds. The north side is bordered by a concrete wall. Near the wall is a wooden structure,

about 4 meters (12 feet) square and 15 centimeters (6 inches) high, covering the hole used to feed

coal to the conveyor belt.

Waste Type: Demolition and Inert Waste

Waste A waste determination for Anthracite (Anthrafilt) was performed in 1994. A waste

Description: determination for bituminous coal dust was performed in 1996. Both waste streams were

determined to be nondangerous.

Site Code: 200-W-68 Classification: Rejected (5/31/2001)

Site Names: 200-W-68, RCRA General Inspection

Report 200WFY99, Item #3, Historic

Disposal Site

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a small area, measuring 4.6 by 3 meters (15 by 10 feet), that contains rusted electrical **Description:** equipment. The material includes conduit, a light reflector, a space heater, a vent pipe, a little

equipment. The material includes conduit, a light reflector, a space heater, a vent pipe, a little broken glass, and some pieces of charcoal. None of the equipment would have held liquids such

as cooling oils or PCBs. One rock appears to have been fire cracked, but there is no discoloration

ReClassification:

of the soil. The vegetation at the site matches the surrounding area.

Waste Type: Misc. Trash and Debris

Waste The wastes consist of pieces of rusted electrical equipment, with small amounts of broken glass

Description: and charcoal. None of the electrical pieces would have held liquids.

Site Code: 200-W-70 Classification: Accepted

Site Names: 200-W-70, 200 West Original Burn Pit, ReClassification: Rejected (5/31/2001)

2731 Burning Pit

Site Type:Burn PitStart Date:1944Site Status:InactiveEnd Date:1949

The site is no longer visible, marked, or posted. It can be seen in an aerial photo from 1948, and

Description: Hanford drawing H-2-10011. Its is just outside the current Z Plant fenced area. The location is a

flat, graveled parking area, containing the tile field for septic system 2607-WB.

Waste Type: Construction Debris

Waste The pit received miscellaneous debris and scrap lumber during early 200 Area construction

Description: projects.

200-W-71 **Classification:** Accepted **Site Code:**

200-W-71, Undocumented Trench **ReClassification: Site Names:**

Start Date: Site Type: Trench **Site Status:** Inactive **End Date:**

Site The open trench was visible on a 1948 aerial photograph of 200 West Area. The trench is also **Description:**

visible on photograph number 3757, taken in May 1956. Smoke is emitting from the trench, indicating it was used as a burn pit. The trench has been backfilled. The area where the trench had been located is not marked or posted. The area seems somewhat disturbed and is covered

with cheatgrass and some rabbitbrush.

Waste Type: Misc. Trash and Debris

Waste Drawing H-2-1495 labels the trench as "Maintenance Disposal Ground". Historical photographs

Description: show smoke emitting from the trench, indicating it was used as a burn pit.

Site Code: 200-W-103 Rejected (Proposed) **Classification:**

Site Names: 200-W-103, 201-W Concrete Silo **ReClassification:**

Site Type: Silo **Start Date: Site Status: End Date:** Inactive

The structure is a concrete silo. The silo is marked with painted lines, dividing it into rows and Site **Description:**

sections. The rows are labeled A, B, C, D, and E. The sections are labeled 1 through 10.

Electronic sensing devices are embedded into some of the concrete sections. A white, cylindrical

liner is standing next to the silo.

Waste Type: Demolition and Inert Waste

Waste This was a test facility that did not receive any waste.

Description:

Site Code: 218-W-6 **Classification:** Accepted

Site Names: 218-W-6 Burial Ground **ReClassification:**

Burial Ground Start Date: Site Type: Site Status: End Date: Active

Site The site is delinated with light posts and chain. It is marked with signs that say "Danger - Keep

Description: Out - Authorized Personnel Only".

Site Code: 600 BPHWSA **Classification:** Accepted

600 BPHWSA, 600 Area Batch Plant ReClassification: Rejected (9/6/2000) **Site Names:**

HWSA, Hazardous Waste Storage Area

(607 Batch Plant)

Site Type: Storage Pad (<90 day) **Start Date:** 1984

Site Status: Inactive **End Date:** Site Description:

The accumulation area is reported to be in the area that is fenced with chain link and adjacent to the 607 Building, but the specific location within the fenced area is not known. While the area south of the vacant 607 Building is still fenced and locked (April 2000), the entire fenced area is visible enough to determine that no wastes remain.

Waste Type: Barrels/Drums/Buckets/Cans

Waste This site stored miscellaneous containerized maintenance and construction waste up to 90 days.

Description:

Site Code: 600 CL Classification: Accepted

Site Names: 600 CL, 600 Area Central Landfill, Central **ReClassification:**

Landfill, Central Waste Landfill, CWL, Solid Waste Landfill, SWL, 671 Facility

Site Type: Sanitary Landfill Start Date: 1973

Site Status: Inactive End Date: 1996

Site The landfill is approximately 15.4 hectares (38 acres) consisting of 39 unlined solid waste

Description: trenches and 5 unlined liquid disposal trenches. All trenches have been backfilled. The landfill is

enclosed by an 8 foot tall fence with lockable gates.

The Nonradioactive Dangerous Waste Landfill (NRDWL) is located adjacent to the Phase I

trenches, on the north end of the landfill.

Waste Type: Misc. Trash and Debris

Waste Description:

Prior to 1982, detailed log books were not maintained. It is estimated that Phase I received approximately 179,000 cubic meters, (234,000 cubic yards) and Phase II received approximately 417,000 cubic meters (546,000 cubic yards) of solid waste. Forty percent of the solid waste is assumed to be office waste consisting mostly of paper products. Construction and demolition debris consists mostly of wood and wooden pallets. Asbestos waste accounts for approximately 10% (by volume) of the inventory. Miscellaneous wastes include empty containers, medical waste from the first-aide stations and inert materials. Large bulky items such as appliances and office furniture were also placed in the solid waste trenches. An estimated 3,800,000 to 5,700,000 liters (1,000,000 to 1,500,000 gallons) of sewage and 380,000 liters (100,000 gallons) of 1100 Area catch basin wastes were placed in the liquid trenche

Site Code: 600 ESHWSA Classification: Accepted

Site Names: 600 ESHWSA, 600 Area Exploratory Shaft ReClassification: Rejected (9/6/2000)

HWSA, 600 Area Exploratory Shaft Hazardous Waste Storage Area, Hazardous Waste Storage Area (Exploratory Shaft)

Site Type:Storage Pad (<90 day)</th>Start Date:1983Site Status:InactiveEnd Date:1988

Site This site is at the former site of the Exploratory Shaft Facility. This facility has been

Description: decommissioned and reclaimed. No visual evidence of the site remains, but the specific location

is not known.

Waste Type: Barrels/Drums/Buckets/Cans

Waste

Materials located at the site were excess paint, anti-corrosive coatings, fuels, lubricants, and

Description: other similar potentially hazardous materials.

Site Code: 600 NRDWL Classification: Accepted

Site Names: 600 NRDWL, 600 Area Nonradioactive **ReClassification:**

Dangerous Waste Landfill, NRDW Landfill, Nonradioactive Dangerous Waste Landfill (Central Landfill), NRDWL

Site Type:Sanitary LandfillStart Date:1975Site Status:InactiveEnd Date:1985

Site This Nonradiological Dangerous Waste Landfill (NRDWL) consists of nineteen unlined trenches.

Description: The nineteen trenches are located adjacent to the Phase I trenches, on the north end of the Central

Waste Landfill (CWL) (WIDS site 600 CL). The Phase I trenches and the Phase II (CWL) trenches are separated by a wire fence. Both the CWL trenches and the NRDWL trenches have

been backfilled and covered with 1.8 to 3 meters (6 to 10 feet) of soil.

Waste Type: Abandoned Chemicals

Waste This waste consisted of small quantity laboratory chemicals, bulk organic waste, solvent waste, paints, paint thinners, waste oils and empty containers. Trenches 19N, 26, 28, 31, 33, and 34

were used for the above described chemicals.

Waste Type: Asbestos (friable)

Waste The bulk of the waste asbestos material came from building demolition or renovation activities.

Description: This material was disposed of in Trenches 2N, 20, 21, 22, 23, 25, 27, 29, and 30. The asbestos

waste was generally not containerized before disposal. It is probably a mix of friable and non-

friable material.

Waste Type: Misc. Trash and Debris

Waste This waste consisted largely of office and lunchroom waste and construction/demolition debris.

Description: Trench 1N received this waste.

Waste Type: Sludge

Waste One instance occurred where Trench 34 received approximately 5,300 liters (1,400 gallons) of

Description: septic tank sludge.

Site Code: 600 OCL Classification: Accepted

Site Names: 600 OCL, 600 Area Original Central ReClassification:

Landfill, Original CLF

Site Type:Sanitary LandfillStart Date:1973Site Status:InactiveEnd Date:1973

Site This site is a backfilled trench that is posted "Underground Radioactive Material".

Description:

Waste Type: Misc. Trash and Debris

Waste This site contains general office wastes, some glass, electrical wastes, and minimal metal

Description: wastes. Radioactive contamination was found at this site in 1988 during investigative activities.

Site Code: 600-36 Classification: Accepted

Site Names: 600-36, Ethel Railroad Siding (Burn Pit) **ReClassification:**

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site is an area of scattered debris and some evidence of burning, adjacent to the Ethel railroad

Description: siding.

Waste Type: Demolition and Inert Waste

Waste The waste at the unit appears to be from burning activities.

Description:

Waste Type: Oil

Waste There is evidence of oil spills.

Description:

Site Code: 600-38 Classification: Accepted

Site Names: 600-38, Railroad Siding Susie, 600-25, **ReClassification:**

Susie Junction

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is at the "Susie" railroad junction. The northeast corner of the junction has an excavated

Description: area that may have contained a siding for decontamination of railroad cars.

In 1996 Ray Johnson, in an interview said that the site had been "picked up" by unknown parties,

but most of the railroad maintenance equipment was left at the site.

Waste Type: Asbestos (friable)

Waste The site waste potentially included asbestos.

Description:

Waste Type: Barrels/Drums/Buckets/Cans
Waste The site waste included drums.

Description:

Waste Type: Equipment

Waste The site contains railroad maintenance equipment.

Description:

Waste Type: Misc. Trash and Debris

Waste The site contained miscellaneous trash.

Description:

Site Code: 600-40 Classification: Accepted

Site Names: 600-40, West of West Lake Dumping Area **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

The unit is an old dumping area. The debris is mostly consolidated in one of two locations, either along the road or on the hillside. The site along the road is approximately 364 square meters

along the road or on the hillside. The site along the road is approximately 364 square meters (3918 square feet) in area. The site on the hillside is 123 square meters (1324 square feet) in area. The area listed in the dimensions represents the total area of both dumping areas.

Additionally, a few pieces of scattered debris can be found on the hillside.

Waste Type: Misc. Trash and Debris

Waste The waste along the dirt road includes chunks and slabs of concrete, lumber, miscellaneous metal debris, rusted cans approximately 30.5 centimeters in diameter and 40.6 centimeters tall

(12 inches in diameter and 16 inches tall), and what appears to be roofing (black, tarry sheets with gravel) materials. On the hillside are 2 small wooden structures approximately 1.8 meters by 1.8 meters by 1.2 meters (6 feet by 6 feet by 4 feet), a pile of wooden posts with each post approximately 20.3 centimeters in diameter and 1.8 meters long (8 inches in diameter and 6 feet long), other wood debris, what appears to be a wheelbarrow, and 2 large rusted metal cans approximately 20.3 centimeters by 20.3 centimeters by 35.6 centimeters tall (8 inches by 8 inches by 14 inches tall) and 30.5 centimeters in diameter by 35.6 centimeters tall (12 inches in

diameter by 14 inches tall).

Site Code: 600-51 Classification: Accepted

Site Names: 600-51, Chemical Dump, Pile of White **ReClassification:**

Powder

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This site consists of a pile of white powdered chemical substance. Sampling determined the

Description: powder is a sodium compound.

During a site visit on October 27, 1999, it was observed that the pile of white powder is gone. The former location of the pile is an elliptical area with little or no vegetation. There do not appear to be any signs of soil discoloration or traces of the white powder. It is unknown how long the pile of white powder has been gone or whether the lack of vegetation is temporary or long term. The surrounding area is covered with grasses, tumbleweeds and tumble mustard.

Waste Type: Chemicals

Waste A sample of this material was analyzed with the HAZCAT field analysis kit. The bulk of this

Description: material appears to be a sodium compound.

Site Code: 600-65 Classification: Accepted

Site Names: 600-65, 607 Batch Plant Drum Site **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site In 1995, the site had two crushed and flattened 55-gal drums, one oil filter housing

Description: (approximately 2 quarts [1.9 liters]), a metal cable, one large concrete block (0.5 cubic yards [0.4

cubic meters]), and indications of possible petroleum disposal.

In 2001, the items noted above could not be located, and the area is possibly being used for fill

material.

Waste Type: Oil

Waste Two crushed and flattened 55-gal drums, one oil filter housing (not 1-gal can), one large

Description: concrete block, and indications of possible petroleum disposal. Reported Date: April 17, 1995.

In October 2001 these items were not located at the site.

Site Code: 600-66 Classification: Accepted

Site Names: 600-66, 607 Batch Plant Orphan Drums **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of one rusted 55-gallon (208 L) drum laying on the ground surface on its side.

Description: No label or hazardous substance are evident.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Two rusted drums, contents unknown.

Description: Reported Date: August 1, 1995

Site Code: 600-70 Classification: Accepted

Site Names: 600-70, Solid Waste Management Unit **ReClassification:**

(SWMU) #2 - Miscellaneous Solid Waste

Site Type: Dumping Area Start Date: 1950

Site Status: Inactive End Date:

Site The site is located on relatively flat terrain except for natural depressions and evidence that

Description: trenches may have been dug. Large amounts of construction materials such as concrete, wood,

metal, cans, barrels and transite are visible. Numerous areas of burned materials were also

observed

Waste Type: Barrels/Drums/Buckets/Cans

Waste Large piles of debris that includes concrete cover blocks, concrete chunks, wood, scrap metal,

Description: cans, buckets, barrels, glass and transite are spread over a large area.

Waste Type: Construction Debris

Waste Concrete, rebar.

Description:

Waste Type: Asbestos (friable)

Waste

Suspected friable asbestos.

Description:

Waste Type: Asbestos (non-friable)

Waste

Transite

Description:

Waste Type: Misc. Trash and Debris

Waste

Metal lathe turnings, glass, lumber and tar.

Description:

Site Code: 600-71 Classification: Accepted

Site Names: 600-71, 607 Batch Plant Burn Pit ReClassification:

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The site consists of an area of charred ground, a piece of rusted sheet metal and small pieces of

Description: debris.

Waste Type: Misc. Trash and Debris

Waste Metal, wood, glass, and rubber debris. Charred remains of burned material.

Description: Reported Date: August 1, 1995. This material was still present on the 2002 site visit.

Site Code: 600-146 Classification: Accepted

Site Names: 600-146, Steel Structure on Northwest Side

of Gable Mountain

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site Description:

The site includes a steel structure constructed of steel "I" beam and "L" beams. The interior of the structure contains stainless steel piping running throughout. Metal grating is located on three levels of the structure. The structure appears to be laying in a horizontal position. Debris observed laying around the structure includes stainless steel pipe, metal rings, metal boxes, empty cans and wood.

ReClassification:

Two earth berms are located just east of the metal structure. To the east of the berms is a small concrete pad approximately 1.5-1.8 meters (5-6 feet) square.

There is a pile of lumber near the metal structures. Some of the lumber has shingles attached. This could be the remains of a small building associated with the concrete pad.

There is a small, 5.1-7.6 centimeters (2-3 inches) in diameter, area of discolored soil containing metal fragments and charred wood.

Waste Type: Equipment

Waste The waste is a steel structure, stainless steel piping, metal parts, metal fragments, and the lid

Description: from a military type ammunition can (no label).

Site Code: 600-218 Classification: Accepted

Site Names: 600-218, H-61-H Anti-Aircraft Artillery **ReClassification:**

Site Dumping Area

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The dumping area consists of demolition debris consisting of wood, pipe, barbed wire, metal fence posts, empty oil cans, empty paint cans, food cans, and sheet metal. The dumping area

measures 20 meters by 74 meters (67 feet by 243 feet).

Waste Type: Barrels/Drums/Buckets/Cans

Waste Empty oil cans, paint cans with dried paint.

Description:

Waste Type: Demolition and Inert Waste

Waste Wood waste from former buildings, concrete footings, pipe, sheet metal, barbed wire, steel fence

Description: posts.

Site Code: 600-220 Classification: Accepted

Site Names: 600-220, H-51 Anti-Aircraft Artillery Site **ReClassification:**

Dumping Area

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1958

Site The dumps are located in three general areas with two of them fenced off. The July 2000 fire

Description: burned off any flammable material, such as wood, that had remained at the site. The first dump

contains metal, transite, fluorescent light bulbs, metal ducting, fiberglass insulation, an unknown white granular substance, pipe, and wire. The second site was mostly wood, little remains now. The third area is a relatively large area consisting of empty cans and empty food, oil, paint and bleach bottles. Several wooden ammunition boxes and cardboard canisters were observed before 2000, but are now gone. The area appears to have been scraped with a bulldozer. Several waste

materials are partially buried.

Waste Type: Misc. Trash and Debris

Waste Wood, metal, transite, fiberglass, piping, glass, fluorescent light tubes, a white granular **Description:** substance, empty cans, buckets, and bottles, fence posts, barbed wire, and concrete

Waste Type: Asbestos (non-friable)

Waste Transite siding

Description:

Site Code: 600-222 Classification: Accepted

Site Names: 600-222, H-60 Gun Site ReClassification:

Site Type: Military Compound Start Date:
Site Status: Inactive End Date:

Site **Description:** There is very little evidence of the former military gun site. A few trees, walkways, roads and an "underground telephone" warning sign are present (a second "underground telephone" sign

burned in the July 2000 fire).

After the July 2000 fire, other material left at the site has become visible, including pieces of ceramic pipe, a dumpsite with two oil filters, coat hangers, and a few small pieces of transite siding.

South of the access road are several small piles of decayed batteries or fuses.

Waste Type: **Batteries**

South of the main area and access road are several small piles of decayed batteries or fuses. In Waste

another pile are two oil filters, one whole and the other in parts. **Description:**

Site Code: 600-223 **Classification:** Accepted

Site Names: 600-223, Military Camp South of 200W, H- **ReClassification:** Rejected (5/31/2001)

50 Gun Site Pit

Depression/Pit (nonspecific) **Start Date: Site Type:**

Site Status: Inactive **End Date:** 1958

Site The site was described in 1987 as a pit that is filled with blown in tumbleweeds. Fence posts and **Description:** barbed wire are visible on the northwest corner of the pit. A sanitary sewer manhole is located

just south of the pit. While the presence of the tumbleweeds made determining if other debris was present impossible when the site was discovered, the July 2000 fire showed that the pit is empty.

A plastic orange fence surrounds the pit to warn of falling danger.

Waste Type: Equipment

Waste Steel fence posts and barbed wire.

Description:

Waste Type: Vegetation

Description:

Waste

The pit is filled with blown in tumbleweeds.

600-226 **Site Code: Classification:** Accepted

600-226, Gun Site H-42 Dumping Area ReClassification: **Site Names:**

Site Type: Start Date: Dumping Area

1958 **Site Status:** Inactive **End Date:**

The site is an old dumping area for an anti-aircraft site. The surface of the site has scattered and Site decaying debris including pipe, glass, empty buckets, slightly rusted (not corroded) 55-gallon **Description:**

drum, dried paint, cans, transite, broken concrete, and dry cell batteries. Wood had formerly been

present, but was burned in the July 2000 fire.

Waste Type: Misc. Trash and Debris

This site has miscellaneous trash and debris scattered throughout the site. Material such as Waste transite siding, rusty nails, charred wood, broken bottles, metal piping and gauges, green metal **Description:**

containers, that appear to be of army issue, are at the site. Some of the debris sites have the

appearance of being dumps for the demolition of the anti-aircraft gun site, which were then burned and buried as final steps when the army left. The July 2000 fire burned off the vegetation from the site and allowed the covering sand to be blown away, exposing the debris.

Site Code: 600-228 Classification: Accepted

Site Names: 600-228, H-40 Gun Site Dumping Area **ReClassification:**

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1958

Site Description:

the main site measures about 12 meters (40 feet) in diameter and contains sheetrock, metal, transite, glass and empty paint cans. Two small pits located in the south of the site are each about 4 meters (15 feet) in diameter. One pit is empty and the other contains steel fence posts and barbed wire. The largest pit is to the south-southeast, and on the topographic slope facing to the south. It contains a large quantity of metal objects, as well as some transite and glass. The July 2000 fire burned much of the wood debris in this pit and the western pit.

The dumping areas are located in pits in the southern portion of the site. The pit located west of

Site Code: 600-236 Classification: Accepted

Site Names: 600-236, Soilcell 607 Site; Petroleum **ReClassification:**

Contaminated Soil, Bioremediation site

Site Type:Surface ImpoundmentStart Date:1994Site Status:InactiveEnd Date:1995

Site The site was a treatment facility for petroleum contaminated soil. The site is rectangular shaped

with earth berms on all sides. The site is lined with black plastic and the contaminated soil is spread evenly on top of the black plastic throughout the interior of the site. The site is posted on all sides with signs stating: Keep Out Petroleum Contaminated Soil - For Entry Contact 376-7053. No visible petroleum stains or odors were present at the time of the investigation.

Waste Type: Soil

Waste Petroleum contaminated soil.

Description:

Description:

Site Code: 600-266 Classification: Accepted

Site Names: 600-266, Trash Dump West of Gate 117A ReClassification: Rejected (5/31/2001)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This site was discovered after the June 2000 fire. Large sagebrush had been concealing the

Description: debris. After the fire destroyed the sagebrush, an area of about 20 by 20 meters (65 by 65 feet)

containing most of the trash was noted. Other material trailed off to the north. The debris (except

for the cable) was removed within a month after the fire exposed it.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Metal, glass, cinder blocks, and transite debris had been disposed here, but are now removed.

Description:

Site Code: 600-281 Classification: Accepted

Site Names: 600-281, Scattered debris South of Army ReClassification:

Loop Road

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site After the range fire in June 2000, additional areas of debris were visible. Five areas of **Description:** concentrated debris were identified. The debris includes material suspected to be asbestos,

charred wood, glass, metal pipes, gauges and green metal containers.

Waste Type: Demolition and Inert Waste

Waste Five areas of concentrated debris were identified. The debris includes material suspected to be

Description: asbestos, charred wood, glass, metal pipes, gauges and green metal containers. Three

compressed gas cylinders were found adjacent to well 699-16-51.

Site Code: 622-1 Classification: Accepted

Site Names: 622-1, Construction and Demolition Debris **ReClassification:** Rejected (5/31/2001)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site All material has been removed and the site sampled for radioactivity, asbestos, and organics. The

Description: site is no longer marked or posted.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Some 208-liter (55-gallon), 19-liter (5-gallon), and 4-liter (1-gallon) containers were present at

Description: the site.

Waste Type: Misc. Trash and Debris

Waste The site contained miscellaneous trash.

Description:

Waste Type: Asbestos (non-friable)

`

Description:

Waste

The site contained transite siding.

Waste Type: Asbestos (friable)

Waste The site contained friable asbestos.

Description:

Site Code: 628-2 Classification: Accepted

Site Names: 628-2, 100 Area Fire Station Burn Pit ReClassification:

Site Type: Burn Pit Start Date:

Site Status: Inactive End Date: 1985

Site This site is an unmarked pit composed of sand and dirt with sparse vegetation showing signs of

Description: stress. The site has ash, debris, and soil discoloration.

During a site visit on October 27, 1999, a small shallow pit was observed. A pile of soil at the east end of the pit suggests that the depression was created by heavy equipment. The bottom of the small pit is covered with rock and cobble. There are a few signs of burning (small pieces of charred wood) and some debris in the pit itself. Most of the debris and signs of burning and stressed vegetation are outside of the pit, to the south and west. Debris at the site includes charred wood, metal, electrical wiring and equipment, and roofing material. The vegetation in the area is primarily cheatgrass and bunch grasses with some sagebrush. There are some circular shaped areas with little or no vegetation. It is difficult to determine the extent of the site; the evidence of burning and stress is scattered and mixed with undisturbed areas. There is also scattered debris in surrounding areas that does not appear to have been subject to burning.

Waste Type: Chemicals

Waste The waste site contains motor oil, diesel fuel, and toluene. Other chemicals were potentially

Description: burned at the site.

OCSA Site Code: Classification: Accepted

Site Names: OCSA, Old Central Shop Area, Central **ReClassification:**

Shop Area

Site Type: Foundation **Start Date:**

Site Status: Inactive **End Date:**

The site consists of building foundations and scattered debris. A site visit on 12-4-97 observed Site **Description:**

pieces of lumber, corrugated metal, bricks, shingles, buckets, a barrel, office furniture, and

wooden tables. There are two pits containing debris and nails.

Demolition and Inert Waste Waste Type:

Waste The site contains miscellaneous demolition debris and several foundations can be seen. There is

Description: also evidence of burning.

Waste Type: Sanitary Sewage

Waste The site contained a sanitary sewer system consisting of a tank(s), open trench, and settling

Description: ponds.

UPR-200-E-106 Site Code: Classification: Accepted

Site Names: UPR-200-E-106, Contamination at a **ReClassification:**

Burning Ground, UN-200-E-106

Site Type: Unplanned Release **Start Date:** 1946 **End Date: Site Status:** Inactive 1946

Site UPR-200-W-106 is an unplanned release that occurred in a burning ground in the 200 East Area.

Description:

Waste Type: Chemicals

The waste consisted of radiologically contaminated towels. Waste

Description:

Site Code: UPR-200-W-37 Classification: Accepted

Site Names: UPR-200-W-37, Contaminated Boxes **ReClassification:**

Found in a Burn Pit

1955 Site Type: Unplanned Release **Start Date: Site Status: End Date:** 1955 Inactive

The burn pit is not marked or posted. It was located in an area that is currently part of the 218-W-Site

4C Burial Ground. **Description:**

Misc. Trash and Debris Waste Type:

Waste Contents from the broken boxes included three cotton swabs and two tissues that were

Description: contaminated to a maximum of 100 millirad/hour. The site was cleaned by removing the cartons

to the proper burial trench and decontaminating the pit

UPR-200-W-70 **Site Code: Classification:** Accepted

UPR-200-W-70, Contamination Found at **ReClassification: Site Names:**

the 200 West Burning Ground

Start Date: 1973 Site Type: Unplanned Release

Site Status: End Date: Inactive

The release site is not marked or posted. It is adjacent to the northwest access road into the 200-

W ADB (ash disposal basin), and has been covered with several feet of ash. **Description:**

Waste Type: Ash

Waste **Description:**

Beta/gamma contamination measuring 5,000 to 50,000 counts/minute was found along the bumper rails at the edge of the combustible trench. Other area of contamination ranging from 20,000 counts/minute to 30 millirads/hour beta/gamma was identified inside the combustible trench. An area on the south side of the combustible trench was found to have contamination ranging from 5,000 to 200,000 disintegrations/minute alpha. A sample from the trench (a chunk of rusty debris) showed americium-plutonium contamination.

Site Code: Z PLANT BP **Classification:** Accepted

Z PLANT BP, Z Plant Burning Pit, Z Plant **Site Names: ReClassification:** Rejected (5/31/2001)

Burn Pit

Site Type: Burn Pit **Start Date:** 1948 **Site Status: End Date:** 1960 Inactive

Site This unit is a rectangular burning pit trench located within (under) Burial Ground 218-W-4C.

Description: Stenner et al. report that the burning pit was exhumed during the excavation of Trench 7 in 218-

W-4C.

Because the site is entirely contained within the burial ground, and was exhumed during construction of the burial ground, it is proposed for consolidation with site 218-W-4C. Future remedial activities will address both sites together, and the sites are linked under the Regulatory

tab page of WIDS.

Waste Type: Ash Waste The site was used to burn combustible nonradioactive waste and non-hazardous laboratory

Description: waste, including unnamed chemicals.

The Site Was Consolidated With:

Site Code: 218-W-4C

Site Names: 218-W-4C, Dry Waste No. 004C

Reason: The burn pit is entirely contained with the larger burial ground, and is reported to have been exca

200-SW-2

Site Code: 218-C-9 Classification: Accepted

Site Names: 218-C-9, Dry Waste No.0C9, 218-C-9 **ReClassification:**

Burial Ground

Site Type:Burial GroundStart Date:1985Site Status:InactiveEnd Date:1989

Site The entire site has been backfilled and surface stabilized. It is posted as an Underground **Description:** Radioactive Material area. The solid waste burial portion of this waste site is not separately

marked or posted from the liquid waste portion of the site.

Waste Type: Demolition and Inert Waste

Waste The waste consists of radiologically contaminated concrete rubble, large equipment (pulsers),

Description: roofing material, metal scrap and other demolition debris from the decommissioning of the 201-C and other Hot Semiworks facilities. Contaminated soil from adjacent areas located east and

southeast of 201-C (known as UN-216-E-37 and UN-216-E-39) was also placed into the pit.

Waste Type: Chemicals

Waste Asbestos has been disposed to this burial ground, but the report does not specify if it was friable

Description: or non-friable.

Site Code: 291-C-1 Classification: Accepted

Site Names: 291-C-1, 291-C-1 Stack, 291-C Stack ReClassification:

Burial Trench

Site Type:Burial GroundStart Date:1949Site Status:InactiveEnd Date:1987

Site The 291-C Stack was a double-shell structure made of reinforced concrete, acid-resistant brick

Description: and mortar. The stack was demolished in 1988 and now lies in a trench south of where it stood.

The area has been surface stabilized with an ash cover (sitecode 200-E-41). The stack burial trench is not marked and cannot be separately distinguished from the rest of the surface stabilized

area.

Waste Type: Demolition and Inert Waste

Waste The radioactively contaminated stack now lies in a trench south of where it stood. It was

Description: estimated to contain 100 curies of plutonium and 600 curies of beta contamination.

Site Code: 200-E-20 Classification: Rejected (4/26/2000)

Site Names: 200-E-20, 218-E-10 Borrow Pit **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1980

Site Status: Inactive End Date:

Site The site is a shallow, scraped area located north of the east end of the 218-E-10 Burial Ground. It is included within the area originally reserved for the 218-E-10 Burial Ground. It is posted with

signs that read "Do Not Enter - 218-E-10 Burial Ground - Authorized Personnel Only." The borrow pit has revegetated naturally.

Site Code: 200-E-21 **Classification:** Rejected (4/26/2000)

Site Names: 200-E-21, 218-E-12A and 218-E-12B **ReClassification:**

Borrow Pit, Pit 33, 200-E-22

Site Type: Depression/Pit (nonspecific) **Start Date:** 1979

Site Status: End Date: Active

The 218-E-12A / 218-B-12 B Burial Ground Borrow Pit is a large scraped area located west of Site

Description: the 218-E-12A Burial Ground and south of the 216-B-2 Covered Ditches. It is not marked or

posted.

200-E-106 **Site Code: Classification:** Discovery

200-E-106, ILAW, Immobilized Low-**Site Names: ReClassification:**

Activity Waste, Immobilized Low-Activity

Tank Waste

Site Type: Trench **Start Date: Site Status:** Inactive **End Date:**

Site As of January 2002, the plans for this site are to construct trenches in the middle of the southern

section of the 200 East Area. However, no construction has yet begun. **Description:**

Waste Type: Process Effluent

Waste The waste disposed in these trenches will be vitrified low-activity waste from the single and

Description: double-shelled tanks. More than 200,000 cubic meters (7,000,000 cubic feet) of waste is

expected to be disposed at the site.

Site Code: 218-E-1 **Classification:** Accepted

218-E-1, 200 East Dry Waste No. 001 **ReClassification: Site Names:**

Site Type: Burial Ground Start Date: 1945 **Site Status:** Inactive **End Date:** 1953

The burial ground consists of fifteen 61-meter (200-foot) long trenches running north and south, Site

ranging from 5 to 6 meters (16 to 20 feet) wide. The site has been backfilled and surface **Description:**

stabilized. It is surrounded with concrete marker posts and Underground Radioactive Material

signs.

Waste Type: Misc. Trash and Debris

Waste This unit received mixed fission product/transuranic dry waste.

Description:

218-E-2 **Site Code: Classification:** Accepted

ReClassification: Site Names:

218-E-2, 200 East Industrial Waste No. 002, Equipment Burial Ground #2

Site Type: Burial Ground Start Date: 1945

Site Status: Inactive End Date: 1953

Site Description:

The site is a burial ground that consists of 9 industrial waste trenches.

Waste Type: Misc. Trash and Debris

Waste This site received 0.0031 cubic meters (0.1 cubic feet) of mixed fission products/transuranic

Description: (MFP/TRU) dry wastes, which were backfilled over.

Site Code: 218-E-2A Classification: Accepted

Site Names: 218-E-2A, Regulated Equipment Storage ReClassification:

Site No. 02A, Burial Trench

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1950

Site The site contains a single east-west trench and was also used as an above-ground storage site for **Description:** Contaminated equipment. The trench is marked as an Underground Radioactive Material area.

Waste Type: Equipment

Waste There are no burial records available for waste disposed of at this trench.

Description:

Site Code: 218-E-3 Classification: Rejected (5/31/2001)

Site Names: 218-E-3, Construction Scrap Pit **ReClassification:**

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1971

Site The pit was exhumed and material removed. It is now part of an open field with sparse vegetation

Description: (rabbitbrush and cheatgrass) growing in the gravel.

Waste Type: Construction Debris

Waste The site received metal slip forms, barrels and timbers from the construction of 202-A that

Description: became contaminated with ruthenium-106 from a REDOX stack release.

Site Code: 218-E-4 Classification: Accepted

Site Names: 218-E-4, 200 East Minor Construction No. ReClassification:

4, Equipment Burial Ground #4

Site Type:Burial GroundStart Date:1955Site Status:InactiveEnd Date:1956

Site It is marked and posted with "Underground Radioactive Material" signs.

Description:

Waste Type: Construction Debris

Waste Description:

This site received repair and construction wastes from the 221-B Building modifications.

Site Code: 218-E-5 Classification: Accepted

Site Names: 218-E-5, 200 East Industrial Waste No. 05, **ReClassification:**

Equipment Burial Ground #5

Site Type: Burial Ground Start Date: 1954

Site Status: Inactive End Date: 1956

Site The site contains 2 trenches areas. One area is 104 meters (340.5 feet) long by 40 meters (131

Description: feet) wide, containing multiple narrow trenches. The second area is a single trench 102 meters

(334.5 feet) long by 19.5 meters (64 feet) wide. The trench is orientated in a north-south direction.

Waste Type: Equipment

Waste The large area with multiple narrow trenches received industrial dry waste and small boxes. The

Description: north end of the long single trench contains railroad boxcars contaminated with uranyl nitrate

hexahydrate (UNH).

Site Code: 218-E-5A Classification: Accepted

Site Names: 218-E-5A, 200 East Industrial Waste No. ReClassification:

005A, Equipment Burial Ground #5A

Site Type:Burial GroundStart Date:1956Site Status:InactiveEnd Date:1959

Site The 1980 Burial Ground Characterization Report indicates the site to be a single, large excavation

Description: measuring 30.5 by 36.6 meters (100 by 120 feet).

Waste Type: Equipment

Waste The site received waste from PUREX L Cell, referred to as the 202-A Burial Package, in the

Description: form of 4 large boxes containing failed equipment and industrial wastes. One of the boxes was

damaged during unloading. The contents were pushed into the trench. The D-2 Column from

PUREX K Cell and a J-2 Pulse column were also buried in this site.

Site Code: 218-E-7 Classification: Accepted

Site Names: 218-E-7, 200 East 222-B Vaults ReClassification:

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1952

The site consists of three underground vaults. The two original wooden vaults are 3 by 3 meters

Description: (10 by 10 feet), and 3.7 meters (12 feet) deep. The tops of the vaults are 1.5 meters (5 feet) below

grade. The wooden vaults are open at the bottom. They are constructed of 5-centimeter (2-inch) wood planking. The third replacement vault is an 2.4-meter (8-foot) diameter concrete culvert pipe encasement, 7.7 meters (25.2 feet) deep. The encasement has a 23-centimeter (9-inch) concrete cover and a 0.3-meter (1-foot) thick concrete floor. All three vaults were connected to

the surface with waste disposal chutes.

Wasta Type. Mice Truch and Dahrie

waste Type: IVIISC. Trash and Deblis

Waste This site received mixed fission product/transuranic (MFP/TRU) wastes.

Description:

Site Code: 218-E-8 Classification: Accepted

Site Names: 218-E-8, 200 East Construction Burial **ReClassification:**

Grounds

Site Type:Burial GroundStart Date:1958Site Status:InactiveEnd Date:1959

Site The site consists of an unknown number of trenches. The trenches are backfilled.

Description:

Waste Type: Construction Debris

Waste The site received mixed fission product/transuranic (MFP/TRU) waste, including repair and

Description: construction wastes from 293-A and the PUREX new crane addition.

Site Code: 218-E-9 Classification: Accepted

Site Names: 218-E-9, 200 East Regulated Equipment **ReClassification:**

Storage Site No. 009, Burial Vault (HISS)

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1958

Site The site was used as an above-ground storage site, covering 62,000 square meters (74,000 square

Description: yards). The unit was never used as a burial ground.

Waste Type: Equipment

Waste This unit was a storage site for fission product equipment that became contaminated in the

Description: uranium recovery program at the tank farm.

Site Code: 218-E-10 Classification: Accepted

Site Names: 218-E-10, 200 East Industrial Waste No. **ReClassification:**

10, Equipment Burial Ground #10

Site Type: Burial Ground Start Date: 1960

Site Status: Active End Date:

Site The site consists of 18 trenches running north and south and 1 trench running east-west. Trench **Description:** #1 is 7.3 meters (24 feet) deep with bottom dimensions of 400 meters (1,300 feet) long by 4.6

meters (15 feet) wide. Trenches #2 to #17 are 4.6 meters (15 feet) deep, 4.9 meters (16 feet) wide at the bottom, and vary in length from 245 meters (805 feet) to 350 meters (1,145 feet). The backfilled trench running east-west has bottom dimensions of 30 meters (100 feet) long by 4.6

meters (15 feet) wide.

Waste Type: Equipment

Waste The site has received failed equipment and mixed industrial wastes from PUREX, B-Plant and 100-N. The trench, running east to west, contains 69 PUREX cover blocks and 4 PUREX

centrifuge blocks. Other waste includes concrete and wooden burial boxes containing tube bundles, jumper vessels, pumps, columns and filters. The trenches contain low level radiological waste, low level mixed waste, and unsegregated, remote handled waste. Trenches 9 and 12 contain some mixed-waste. Trench 9 specifically contains asbestos, di-n-octyl phthalate, and lead as mixed wastes. As of August 1995, this burial ground had received 21,764 cubic meters of waste.

Site Code: 218-E-12A **Classification:** Accepted

218-E-12A, 200 East Dry Waste No. 12A **Site Names: ReClassification:**

Site Type: Burial Ground Start Date: 1953 **End Date:** 1967 **Site Status:** Inactive

The site contains 28 burial trenches that have been backfilled and surface stabilized. The site is Site

marked with concrete AC-540 markers and posted "Underground Radioactive Material." The **Description:**

area of the burial ground is 10.5 hectares (26 acres).

Waste Type: Misc. Trash and Debris

Waste **Description:** Trenches 1 through 3, 12 through 14, and 17 through 25 contain predominately dry waste packaged in cardboard boxes and plastic bags. Trenches 4 through 11, 15 through 16, and 26 through 28 contain predominantly acid-soaked material. Specific contents of Trench 28 are unlisted. A waste inventory logbook dated March 24, 1960 to February 16, 1961 documents burials of tank farm dip tubes, an impact wrench, contaminated cable, jumpers, animal carcasses from 108-F and an offsite shipment of depleted uranium

Site Code: 218-E-12B Classification: Accepted

Site Names: 218-E-12B, 200 East Dry Waste No. 12B, **ReClassification:**

218-E-12B Burial Ground - Trench 94

Site Type: Burial Ground Start Date: 1967

Site Status: Active **End Date:**

The original burial ground was designed to have 29 trenches. The expansion to the north and Site west enlarged the burial ground to include a total of 138 trenches running north and south. Sixty-**Description:**

one of the trenches are 370 meters (1,212 feet) long, thirty-one of the trenches are 293 meters (960 feet) long, and the remaining trenches vary in length from 94 meters (307 feet) to 580 meters (1,901 feet). The first six trenches were 0.9 meters (3 feet) wide and 1.2 meters (4 feet) deep. The rest of the trenches were designed to be 4.8 meters (16 feet) deep. Trench 94 was designated

to receive U.S. Navy submarine reactor compartments. The burial ground is marked and

radiologically posted.

Waste Type: Equipment

Waste **Description:** All are orientated in a north-south direction except for Trench 94, which is orientated in an eastwest direction. This burial ground has been used primarily for low-level waste generated mostly from facilities located in the 200 East Area. A special burial of Mixed Fission Product (MFP) was placed in Trench 28. Two trenches (trenches 17 and 27) contain 55 gallon drums of TRU waste. Coordinates for these drums were documented to allow them to be retrieved. Some waste included plutonium contaminated process piping, pumps and other equipment. As of 1995, the site had received 78,740 cubic meters of waste. 36 trenches were filled, two were partially filled and 56 had not been used. Trenches 38, 43, 48 and 53 was used for low-level

mixed waste that included asbestos and copper. Trench 94 is used for the disposal of U.S. Navy defueled submarine reactor compartments. They are composed of various types of steel and approximately 392 tons of lead shielding.

Waste Type: Chemicals

Waste From 1987 to 1990, asbestos and copper were disposed of at this site.

Description:

Site Code: 200-W-5 Classification: Accepted

Site Names: 200-W-5, Burial Ground/Burning Pit, U **ReClassification:**

Plant Burning Pit, UPR-200-W-8

Site Type: Burial Ground Start Date:
Site Status: Inactive End Date:

Site

Description:

Waste Type: Misc. Trash and Debris

Waste The waste includes contaminated coveralls and soil.

Description:

Site Code: 200-W-30 Classification: Rejected (4/26/2000)

Site Names: 200-W-30, 218-W-1A Borrow Pit ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date: 1983

Site Status: Inactive End Date:

The site is a shallow, scraped area adjacent to the east side of the area designated as the 218-W-6

Description: Burial Ground. The area has been revegetated with grasses. The borrow pit is not marked or

posted.

Site Code: 200-W-31 Classification: Rejected (4/26/2000)

Site Names: 200-W-31, 218-W-2A Borrow Pit **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1980

Site Status: Inactive End Date:

Site The area that was used for backfill material for the 218-W-2A stabilization is currently

Description: underneath the southern portion of the 218-W-5 Burial Ground. The borrow pit is no longer

visible.

Site Code: 200-W-32 Classification: Rejected (4/26/2000)

Site Names: 200-W-32, 216-Z-19 Borrow Pit **ReClassification:**

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site The site is no longer visible. It is located under the 218-W-4C Burial Ground eastern extension.

Description:

Site Code: 200-W-75 Classification: Accepted

Site Names: 200-W-75, Radiological Logging System **ReClassification:**

(RLS) Calibration Silos

Site Type: Silo Start Date: 1978

Site Status: Unknown End Date:

Site The site consists of four underground Radiological Logging System (RLS) equipment calibration **Description:** silos. The silos are galvanized steel containers with metal lids bolted on top. The silos have

Description: silos. The silos are galvanized steel containers with metal lids bolted on top. The silos have somewhat different design constructions, for calibrating different types of equipment. One type

consisted of a 25 centimeter (6 inch) capped well casing is inserted through the centers of the silos. There are two risers with bolted lids adjacent to the well casing. The silos are posted with

Underground Radioactive Material signs.

Waste Type: Equipment

Waste The calibration silos contained radioactive sources consisting of known quantities of cobalt-60,

Description: strontium-90, ruethinium-106 and cerium-144 in sealed capsules. Since the silo covers are

posted with Underground Radioactive Material signs, it is assumed the sources are still inside

the silos.

Site Code: 200-W-92 Classification: Accepted

Site Names: 200-W-92, Contaminated Mound of Soil **ReClassification:**

and Debris, Soil Mound West of 241-TY

Tank Farm

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The mound of soil is approximately 1.5 meters (5 feet) high. It is surrounded with chain and

Description: posted with Contamination Area signs. Several radiation flags have been placed in the mound to

identify significant contamination. Rocks, asphalt and chunks of cement are visible. Some

vegetation, including rabbitbrush, is growing on the mound.

Waste Type: Misc. Trash and Debris

Waste Maximum contamination levels of 1,600,000 disintegrations per minute per 100 square

Description: centimeters of beta gamma and 14,000 disintegrations per minute per 100 square centimeters of

alpha were found on the soil and debris.

Site Code: 200-W-101 Classification: Accepted

Site Names: 200-W-101, Contaminated Material West ReClassification:

of 216-S-12 Crib

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of two large boxes and a rusted metal shaft surrounded with light post and chain.

Description: The area had been posted with Contamination Area and Radiation Area signs. The metal shaft is

approximately 18 meters (60 feet) long and extends beyond (outside) the posted area chain. The

radiological posting was changed to Contamination Area in April 2002.

Waste Type: Equipment

Waste The material inside the posted area consists of two large boxes and a long metal pipe (shaft).

Description:

Site Code: 218-W-1 Classification: Accepted

Site Names: 218-W-1, 200-W Area Dry Waste No. 001, ReClassification:

Solid Waste Burial Ground #1

Site Type:Burial GroundStart Date:1944Site Status:InactiveEnd Date:1953

Site The burial ground has been backfilled and surface stabilized. It is inside a 1.83 meter (6 foot) **Description:** fence that encompasses this burial ground and also 218-W-4A, 218-W-11 and 218-W-2. The sit

fence that encompasses this burial ground and also 218-W-4A, 218-W-11 and 218-W-2. The site contains 15 trenches that run east and west. Twelve of the trenches are "V" shaped 2.4 meters (8 feet) deep and 4.9 meters (16 feet) wide at ground level. The other 3 trenches are flat-bottom

trenches 2.7 meters (9 feet) deep and 7.3 meters (24 feet) wide at the surface.

Waste Type: Misc. Trash and Debris

Waste This site received unsegregated, pre-1970 transuranic (TRU) and miscellaneous dry waste. The

Description: radionuclide inventory is estimated to be 7E+05 grams of uranium, 9.4E+04 grams of

plutonium, 3.9 curies of Sr-90 and 4.2 curies of Cs-137. The contaminated soil volume is

approximately 1.6E+04 cubic meters.

Site Code: 218-W-1A Classification: Accepted

Site Names: 218-W-1A, 200-W Area Industrial Waste ReClassification:

Burial Ground #1, Equipment Burial

Ground #1

Site Type: Burial Ground Start Date: 1944
Site Status: Inactive End Date: 1960

Site The burial ground has been backfilled and surface stabilized. It is surrounded with cement marker

Description: posts and Underground Radioactive Material signs.

Waste Type: Equipment

Waste The burial ground received failed contaminated equipment and industrial waste (per RHO-CD-

Description: 673).

Site Code: 218-W-2 Classification: Accepted

Site Names: 218-W-2, 200-W Area Dry Waste No. 002, ReClassification:

Dry Waste Burial Ground No. 2

Site Type:Burial GroundStart Date:1953Site Status:InactiveEnd Date:1956

Site The site is a burial ground that contains 20 miscellaneous dry waste trenches, running east-west. **Description:** The site had been backfilled and stabilized. It is posted as Underground Radioactive Material.

Waste Type: Misc. Trash and Debris

Waste This site received pre-1970 transuranic (TRU) and miscellaneous contaminated dry waste.

Description:

Site Code: 218-W-2A Classification: Accepted

Site Names: 218-W-2A, Industrial Waste No. 02A, **ReClassification:**

Equipment Burial Ground #2

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1985

Site The site has been backfilled and stabilized. It is posted as Underground Radioactive Material.

Description:

Waste Type: Equipment

Waste The unit contains mostly miscellaneous radioactive solid waste from facilities located in the 200 **Description:** West area. The solid waste consists mainly of tanks, concrete blocks, facility wastes, and

process equipment. Sixteen trenches are filled with dry industrial waste. Trench #27 contains contaminated soil scraped from the 216-T-4-1 Pond. Waste buried since November 1980 does not contain hazardous materials. It is possible that wastes disposed of prior to this date may contain hazardous wastes. Of the 25,100 cubic meters (887,000 cubic feet) of waste contained in the unit, only 340 cubic meters (12,000 cubic feet) were disposed of after November 1980. The waste disposed of before November 1980 is both low-level and byproduct, while the waste disposed of since that date is strictly low-level. A waste burial logbook dated January 1958 through November 1963 specifically documents the burial of REDOX centrifuges, jumpers, pumps, filters and miscellaneous cell equipment and wastes. Many of the shipments were contained in large wooden or concrete boxes. One specific inventory sheet states that on October 10,1973 a large burial box (marked B-Plant 58526) was placed in Trench 21 and

contained a PU glove box and miscellaneous scrap.

Site Code: 218-W-3 Classification: Accepted

Site Names: 218-W-3, Dry Waste No. 003 ReClassification:

Site Type:Burial GroundStart Date:1957Site Status:InactiveEnd Date:1961

Site This site is a burial ground that contains 20 dry waste trenches. The site has been backfilled and

Description: surface stabilized. It is posted as Underground Radioactive Material.

Waste Type: Misc. Trash and Debris

Waste This site received miscellaneous unsegregated mixed transuranic (TRU) and non-TRU wastes.

Description: A logbook dated February 1959 through June 1961 documents the burial of 109 drums of

A logbook dated February 1959 through June 1961 documents the burial of 109 drums of uranium scrap (depleted) from California and Oregon, placed in Trench 17, a vehicle (ID - 491)

buried at the east end of Trench 14 and 49 barrels of depleted uranium from Colorado and

Oregon placed in Trench 14.

Site Code: 218-W-3A Classification: Accepted

Site Names: 218-W-3A, Dry Waste No. 003A ReClassification:

Site Type: Burial Ground Start Date: 1970

Active **End Date: Site Status:**

Site

The site is a burial ground that was designed to contain 61 dry and industrial waste trenches running in an east-west direction. Seven are 163 meters (535 feet) long, thirty-five are 284 meters **Description:**

(930 feet) long, and ten are 275 meters (900 feet) long. The remaining trenches range in length from 123 meters (403 feet) to 156 meters (512 feet). The side slopes are 1:1 or as required to match the natural angle of repose. Trench depths range from 3.7 to 5.8 meters (12 to 19 feet).

Four trenches have not been dug.

Waste Type: Soil

Waste Trench #8 contains non-TRU and TRU waste. Trenches #17 and #5 contain TRU waste. **Description:** Trench #40 contains industrial waste. Trench #14 contains 10 large concrete burial boxes of

radioactive soil from the 241-S Tank Farm following a salt waste spill from the 102-S Tank transfer piping in 1973. Dose rates at the site of the spill before removal of the ground ranged to a maximum of 9 mR/h. Trench #17 contains fiberglass reinforced polyester (FRP) plywood boxes in various sizes from the Division of Military Application (DMA) and related weapons decommissioning programs. Trench #7 contains waste from the cleanup efforts at Three Mile Island Nuclear Plant (TMI-2). This site also received irradiated fuel elements from General Electric, Vallecitos, CA. All remaining filled trenches contain dry and industrial waste. This site also received waste from Livermore National Lab; Colorado Springs; General Electric; Walla Walla, WA; 100 N Areas; HEHF; Energy Systems Group; Battelle Columbus Laboratory;

and various other onsite and offsite locations.

Waste Type: Chemicals

Waste **Description:** Wastes disposed to this burial ground since 1987 include: 1,2,4-trimethylbenzene, acetonitrile, aliquat 336, alloy with mercury, asbestos, barium, beryllium, butyl acetate, cadmium, chromium,

cyclohexanone, dibutyl-n/n-diethylcarbomyl phosphate, dioxane, ethanol, ethanolamine,

isopropyl alcohol, lead, mercury, methanol, naphthalene, normal paraffins, oil, silver, toluene, tri-

butyl phosphate, trioctylphosphine oxide, and xylene.

Site Code: 218-W-3AE **Classification:** Accepted

Site Names: 218-W-3AE, Industrial Waste No. 3AE, **ReClassification:**

Dry Waste No. 3AE

Site Type: Burial Ground Start Date: 1981

End Date: Site Status: Active

The site was originally designed to consist of 24 trenches. To make the best use of available Site

space, the site was redesigned to contain 12 trenches with deeper depths. **Description:**

Misc. Trash and Debris **Waste Type:**

Waste The site has been receiving miscellaneous wastes such as rags, paper, rubber gloves, disposable supplies, broken tools, etc. and industrial waste such as failed equipment, tanks, pumps, ovens, **Description:**

agitators, heaters, hoods, jumpers, and accessories. Trenches 2 and 3 have received remotehandled low-level waste. Trenches 5 and 10 are wide bottom stacking trenches. Trench 26 was

designed for disposal of contaminated railroad cars and large tanks.

Waste Type: Chemicals Waste Description:

Wastes disposed of to this site include: aluminum, asbestos, beryllium, bis(2-ethylhexyl)phthalate (DOP), calcium carbonate, cement, charcoal, clay, silicas, talc, copolymer of styrene, copper, di-n-octyl phthalate, graphite, hydrotreated heavy naphtha isopropyl alcohol, lead, mixed esters, phthalate, nylon, peroxydisulfuric acid, disodium salt, resin, sodium chloride, sodium nitrate, sodium phosphate dibasic, steel, tantalum, uranium, and yttrium oxide.

Site Code: 218-W-4A Classification: Accepted

Site Names: 218-W-4A, Dry Waste No. 04A ReClassification:

Site Type:Burial GroundStart Date:1961Site Status:InactiveEnd Date:1968

Site Description:

The site is a burial ground that has been backfilled and stabilized. It is inside a chain link fence and is posted as Underground Radioactive Material. The unit contains 21 miscellaneous dry waste trenches and six vertical storage units (dry wells). The trenches are oriented in an east to west direction with Trench #1 on the southern end of the site and Trench #21 on the northern end. The six 4.6-meter (15-foot) deep dry wells were installed near the east end of Trench #16. The wells were made by welding together 210-liter (55-gallon) steel drums with the ends cut out. The units were buried vertically and used for remote disposal of small, highly radioactive items. The site may also contain two larger caissons located at the extreme east end of the burial ground, between Trenches #17 and #18 and between Trenches #18 and #19. A Hanford drawing (H-2-32487) describes them 12 gage, 66 centimeter (26 inch) diameter well casings that extend 14.6 meters (48 feet) below grade. No documentation has been found describing the use of these caissons.

Waste Type: Equipment

Waste Description:

This site received miscellaneous dry, unsegregated mixed transuranic (TRU) and non-TRU waste. Specific trench contents are mentioned on Drawing H-2-32487 and in the Burial Ground logbook. These sources document the burial of approximately 500 drums of depleted uranium from offsite contractors, pumps and equipment, laboratory hoods from 234-5 Z, 231-Z, 222-U and REDOX, plutonium contaminated missile parts belonging to Boeing, and plutonium contaminated 300 Area laboratory waste. On 5-7-65, ten concrete barrels of high level plutonium was placed in Trench 16. February 2, 1966 states that a "Special Burial" of waste from 234-5Z was made in Trench 20. The eastern end of Trench 19 is marked "Recuplex" on drawing H-2-32487.

Site Code: 218-W-4B Classification: Accepted

Site Names: 218-W-4B, Dry Waste No. 04B ReClassification:

Site Type:Burial GroundStart Date:1967Site Status:ActiveEnd Date:1990

Site Description:

The site contains 13 trenches and one row of 12 caissons. Trenches 7 and 11 contain retrievable TRU waste. The other trenches contain unsegregated TRU and non TRU radioactive waste. The row of caissons include 5 alpha caissons, 6 mixed fission product (MFP) caissons and one silo type caisson used for high activity N-Reactor waste. The alpha caissons and 2 of the MFP caissons are 2.7-meter (8.75-foot) diameter, 3-meter (10-foot) high concrete containers with steel lifting lugs and a 91-centimeter (36-inch) diameter access chute. Two of the MFP caissons are constructed of corrugated steel instead of concrete. The silo type caisson is a 3-meter (10-foot) diameter, 9-meter (30-foot) tall container placed on a concrete foundation with a top concrete shielding slab. It has a 107-centimeter (42-inch) diameter access chute. All three caisson types

are equipped with air filter systems.

Waste Type: Misc. Trash and Debris

Waste Description:

The site received miscellaneous radioactive solid waste from 100, 200 and 300 Areas as well as offsite shipments. Solid waste consists of rags, paper, cardboard, plastic, pumps, tanks, process equipment, and other miscellaneous high dose rate and TRU dry waste. The site contains 114,300 cubic feet of segregated (post-1970) TRU waste. Trenches 7 and 11 contain retreivable TRU waste. The other trenches contain unsegregated TRU and radioactive waste. There are twelve caissons that received remote handled high dose rate and TRU wastes. Five caissons were designated as alpha caissons, but only four were used. They were used from 1970 to 1979. Seven caissons were designated as beta/gamma caissons and were used from 1968 to 1979. The last shipment of waste was deposited into MFP caisson #6 in 1990. No additional waste is planned to be placed in the caissons. As of August 1995, the burial ground had received a total of 10,466 cubic meters of waste.

Site Code: 218-W-4C Classification: Accepted

Site Names: 218-W-4C, Dry Waste No. 004C ReClassification:

Site Type: Burial Ground Start Date: 1974

Site Status: Active End Date:

Site Description:

This burial ground has two parts. The main portion is located on the east side of Dayton Ave. The smaller annexed portion is located east of the main burial ground, north of 16th Street. The unit is designed to contain up to 65 trenches. Forty-eight trenches run east-west. Twenty-four of these are 184 meters (602 feet) long, nineteen are 220 meters (719 feet) long, four are 180 meters (594 feet) long, and one trench is 91 meters (300 feet) long. Seventeen trenches run north-south. Of these, fourteen trenches are 200 meters (665 feet) long and three trenches are 155 meters (508 feet) long.

Waste Type: Equipment

Waste Description:

Seattle, WA. Trench #1 contains drums with plutonium-contaminated soil from the 216-Z-9 Crib and noncombustible TRU waste. Trench #4 contains drums of assorted combustible TRU waste and one module of noncombustible TRU waste. Trench #1, 4, 7, 20, 24, and 25 and the easterly end of Trench #19 contain retrievable waste. Trench #23, 28, 48, 53, and 58 and the remainder of Trench #19 receive buried low-level waste. The remaining trenches are proposed. This site also received waste from 100-N Area, 100-K Area, 100-B Area, General Electric, Babcock & Wilcox, Fermi National Laboratory, Exxon, Bartleville Energy Technology Center, Battelle Columbus Laboratory, and Chemical Nuclear Systems. Spent fuel is stored at this site.

The Navy Reactor Core Trench contains a number of core barrels from Bettis Naval Station near

Waste Type: Chemicals

Waste Wastes disposed of to this site include: copper, bis(2-ethylhexyl)phthalate (DOP), lead, and

Description: nitrogen.

The Following Sites Were Consolidated With This Site:

Site Code: Z PLANT BP

Site Names: Z PLANT BP, Z Plant Burning Pit, Z Plant Burn Pit

Reason: The burn pit is entirely contained with the larger burial ground, and is reported to have been exca

Site Code: 218-W-5 Classification: Accepted

Site Names: 218-W-5, Dry Waste Burial Ground, Low-

Level Radioactive Mixed Waste Burial

Grounds

Site Type: Burial Ground Start Date: 1986

Site Status: Active End Date:

Site In 1979, a large area adjacent to the northwest corner of 200 West Area was annexed and **Description:** designated the Central Waste Complex and 218-W-5. The annexed area extended north from

16th Street to 27th Street and westward to coordinates E564176/N137630. Within the large annex, 84 acres are currently permitted as Low Level Solid Waste Burial Grounds. The area is designed to contain 18 low level solid waste trenches and 4 low level mixed waste trenches. Currently there are 10 active low level solid waste trenches and 2 low level mixed waste trenches.

ReClassification:

The mixed waste trenches are constructed with a polyethylene liner.

Waste Type: Misc. Trash and Debris

Waste This unit is designed to store non-TRU waste and retrievable TRU waste. There are five distinct

Description: storage and disposal areas within the expansion: However, its current use includes only low

level radiological soild waste and low level mixed waste.

Site Code: 218-W-7 Classification: Accepted

Site Names: 218-W-7, 222-S Vault ReClassification:

Site Type:Burial GroundStart Date:1952Site Status:InactiveEnd Date:1960

Site The waste site is a carbon steel burial vault. The outer surface of the vault is coated with a layer

Description: of hot coal tar enamel to prevent corrosion, 4.3 meters (14 feet) deep, resting on a 0.3-meter (1-

foot) concrete foundation. The vault has a dome and vent structure that extends 3.2 meters (10.5 feet) to the surface. The ground surface is graveled, and the vent is protected by yellow metal

poles and a chain with radiation zone signs.

Waste Type: Misc. Trash and Debris

Waste This vault received dry, packaged laboratory and sampler waste from the 222-S Laboratory.

Description:

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-137

Site Names: UPR-200-W-137, 218-W-7, UN-200-W-137

Reason: Duplicate Site

Site Code: 218-W-8 Classification: Accepted

Site Names: 218-W-8, 222-T Vault ReClassification:

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1952

Site Description:

Three underground vaults are contained in this site. The two original vaults are 3 by 3 by 3.7 meters (10 by 10 by 12 feet) deep, made of 5.1 by 30.5-centimeter (2 by 12-inch) wooden planking, with the tops 1.5 meters (5 feet) below grade. The third replacement vault is a concrete culvert pipe encasement 2.4 meters (8 feet) in diameter and 7.6 meters (25 feet) long and 1 meter (3.2 feet) below grade. The top of the encasement is a 23-centimeter (9-inch) precast concrete cover and the bottom is a 30.5-centimeter (12-inch) thick concrete floor. The disposal chutes for the wooden vault were removed.

Waste Type: Misc. Trash and Debris

Waste Description:

This site contains laboratory process sample waste from the 222-T Building.

Site Code: 218-W-9 Classification: Accepted

Site Names: 218-W-9, Dry Waste Burial Ground No. 9, ReClassification:

Non-TRU Dry Waste No. 009

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1954

Site The burial area is 42.7 meters (140 feet) by 29.8 meters (98 feet). The location is designated by **Description:** four corner posts and chain. No data is available regarding depth, slope, or actual area used

inside the posted area.

Waste Type: Misc. Trash and Debris

Waste The unit contains an unknown amount of metal scrap, including the 211-S Tank taken from the

Description: REDOX Facility. The waste contains less than 0.1 curie total beta activity.

Site Code: 218-W-11 Classification: Accepted

Site Names: 218-W-11, Regulated Storage Site **ReClassification:**

Site Type:Burial GroundStart Date:1960Site Status:InactiveEnd Date:1960

Site The unit consists of two burial trenches. Trench #1 is 77 meters (258 feet) long, and Trench #2 is

Description: 46 meters (150 feet) long.

Waste Type: Equipment

Waste This unit was used for burial of low-level, contaminated sluicing equipment that had been used

Description: in the uranium recovery program. Some of the equipment was later taken from the unit and used

in the strontium/cesium recovery program.

Site Code: 600-25 Classification: Accepted

Site Names: 600-25, Susie Junction ReClassification:

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of a gravel pit, disposal pit, ash pile and several waste piles at "Susie Junction,"

Description: where two railroad tracks intersect.

Waste Type: Misc. Trash and Debris

Waste Wastes identified at the unit include 4-5 drums (one which has leaked oil and one which is

Description: labeled "KEROSENE"), rubber boots, canvas gloves, a canvas bag containing laundry, brooms, brushes, chisels mounted on poles hoses, nails, cans, miscellaneous debris and a fluffy white

fibrous material.

Site Code: 600-268 Classification: Accepted

Site Names: 600-268, 200 East Pipe Yard Drum **ReClassification:**

Accumulation Area, Pipe Laydown Yard

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date: 1995
Site Status: Inactive End Date: 1998

Site The storage area and laydown yard are enclosed by a 2.4 meter (8 foot) chain link fence. The **Description:** center coordinates for this site as mapped are N138108.06, E575288.25. The 90-Day Storage

Pad was located in the northeast corner of the fenced area.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Seventeen drums of mixed and radioactive waste from 200 West Area well drilling activities

Description: (generated between 1993 and 1996) were stored at the site. The groundwater in 200 West Area

is contaminated with carbon tetrachloride. The drums contained a mixture of solids, sand and slurry. The drums were designated as F001/carbon tetrachloride. No leaking, damage or evidence of spills was ever recorded at this site. All the drums were removed in May 1998.

They were shipped offsite.

Site Code: UPR-200-E-23 Classification: Accepted

Site Names: UPR-200-E-23, Burial Box Collapse at 218- **ReClassification:**

E-10, UPR-200-W-158

Site Type:Unplanned ReleaseStart Date:1960Site Status:InactiveEnd Date:1960

Site The release site is not separately marked or posted from the burial ground radiological postings.

Description:

Waste Type: Soil

Waste The contamination originated from PUREX process tube bundles (from F-11 and H-4).

Description: Radiological readings ranged from a maximum of 60 millirad/hour beta/gamma at the burial

ground to approximately 1,000 counts/minute outside the 200 East Area fence.

Site Code: UPR-200-E-24 Classification: Accepted

Site Names: UPR-200-E-24, Contamination Plume from **ReClassification:**

the 218-E-10 Burial Ground, UN-200-E-24

Site Type: Unplanned Release Start Date: 1960

Site Status: Inactive End Date:

Site The contaminated area is not currently marked or posted.

Description:

Waste Type: Soil

Waste The release was caused from a burial box containing PUREX tube bundles. The average radiation level on the soil surfaces inside the burial ground fence was 30 millirads/hour at 10.16

centimeters (4 inches). The contamination diminished as it traveled from the burial site. Less than one particle of contamination per 9 square meters (100 square feet) was found outside the

200 East Area perimeter fence.

Site Code: UPR-200-E-30 Classification: Accepted

Site Names: UPR-200-E-30, Contamination Within 218- ReClassification:

E-12A, UN-200-E-30

Site Type:Unplanned ReleaseStart Date:1961Site Status:InactiveEnd Date:1961

Site The burial ground has been surface stabilized. The burial ground is posted as Underground

Description: Radioactive Contamination.

Waste Type: Process Effluent

Waste The release consisted of dried contamination from process jumper with readings up to 500

Description: rads/hour that were inside a wooden burial box.

Site Code: UPR-200-E-35 Classification: Accepted

Site Names: UPR-200-E-35, Buried Contaminated Pipe, **ReClassification:**

UN-218-E-1, 218-E-13

Site Type:Unplanned ReleaseStart Date:1966Site Status:InactiveEnd Date:1966

Site The site is the location of a (1966) contaminated concrete pipe repair. The site is no longer

Description: marked or posted. It is inside the PUREX exclusion fence.

Waste Type: Demolition and Inert Waste

Waste This site received broken pieces of contaminated concrete from the pipe trench, which were left

Description: in the excavation hole and buried following repair to the piping at that location. The site

contains less than 1 curie fission products.

Site Code: UPR-200-E-53 Classification: Accepted

Site Names: UPR-200-E-53, UN-200-E-53, ReClassification:

Contamination at 218-E-1

Site Type: Unplanned Release Start Date: 1978

Site Status: Inactive End Date:

Site The burial ground is surrounded with concrete markers and Underground Radioactive Material

Description: signs. The release site is not marked or posted.

Waste Type: Soil

Waste Beta/gamma with readings to 150 millirads/hour were detected on the bulldozer blade after

Description: working in the 218-E-1 Burial Ground uncovered a portion of the buried waste. Contamination

spots were detected in an area at the south end of the waste trench.

Site Code: UPR-200-E-61 **Classification:** Rejected (5/31/2001)

Site Names: UPR-200-E-61, Radioactive Contamination **ReClassification:**

from Railroad Burial Cars, UN-216-E-61,

UN-200-E-61

Unplanned Release Start Date: 1981 **Site Type: Site Status:** Inactive **End Date:** 1981

Site The site is located at the railroad right-of-way within the area mapped as the Industrial Burial

Description: Grounds (218-E-10). The site is an area of contamination found after a concrete burial box was off-loaded from railroad cars to the 200 East burial grounds. The box had left B-Plant with

unacceptable levels of contamination that were not found until after the box had been off-loaded. Both the railroad car and the offloading ramp showed smearable contamination. The UPR was

decontaminated within a few days after it was discovered.

Waste Type: Process Effluent

Contaminated particles from a B Plant burial box effected the drag-off ramp and several Waste railcars. After it was discovered that the unloading ramp was contaminated to 100,000 counts **Description:**

per minute with beta/gamma, the site was decontaminated to background levels (within two

weeks).

Site Code: UPR-200-E-95 **Classification:** Accepted

Site Names: UPR-200-E-95, UN-216-E-23, UN-200-E-**ReClassification:**

> 95, Ground Contamination Around RR Spur Between 218-E-2A and 218-E-2

Site Type: **Start Date:** 1980 Unplanned Release

Inactive **End Date: Site Status:**

Site The site is a railroad spur located south of the 218-E-2 and 218-E-5 Burial Grounds and north of

Description: the 218-E-2A Burial Ground. It had been barricaded with steel chain and posted as a

Contamination Area. In 1998, the track was covered with gravel and reposted as an Underground

Radioactive Material area

Waste Type: Soil

The material stored on the rail cars contained unknown beta and gamma contamination with a Waste **Description:**

maximum reading of 100,000 counts per minute. The contamination on the rail bed is the result

of contaminated equipment being stored on the tracks over an extended amount of time

Site Code: UPR-200-W-8 Classification: Accepted

Site Names: UPR-200-W-8, UN-200-W-8, 200-W-5, ReClassification:

Old Burial/Burning Pit, U-Plant Burning

Pit/Burial Ground

Site Type: Unplanned Release Start Date: 1950

Site Status: Inactive End Date:

Site The site is posted as an Underground Radioactive Material area.

Description:

Waste Type: Misc. Trash and Debris

Waste Fission products were discovered at the site with approximately 1 curie and a maximum dose

Description: rate of 45 rads/hour at the surface.

Site Code: UPR-200-W-11 Classification: Accepted

Site Names: UPR-200-W-11, Burial Ground Fire, UN- ReClassification:

200-W-11, UPR-200-W-16

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site This site was a result of a spontaneous fire in the 218-W-1 Burial Ground. It is also a duplicate of

Description: UPR-200-W-16, which was mapped correctly on the 218-W-1 Burial Ground.

Waste Type: Chemicals

Waste Eighteen air samples were collected near the 200 West Area Burial Ground during the fire of **Description:** July 9. Only one of the samples showed detectable alpha activity, this being 2.6 by 2.6E+12

July 9. Only one of the samples showed detectable alpha activity, this being 2.6 by 2.6E+12 microcuries/cubic centimeter. A vegetation sample collected near the Meteorology Tower on the following day showed an activity density from alpha emitters of 1.5E+06 microcuries/gram.

Resamples collected several days later did not confirm this result.

The Site Was Consolidated With:

Site Code: UPR-200-W-16

Site Names: UPR-200-W-16, Fire at 218-W-1 Burial Ground

Reason: UPR-200-W-11 is a duplicate of UPR-200-W-16.

Site Code: UPR-200-W-16 Classification: Accepted

Site Names: UPR-200-W-16, Fire at 218-W-1 Burial **ReClassification:**

Ground

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site This site is a result of a 1952 spontaneous fire in the 218-W-1 Burial Ground.

Description:

Waste Type: Ash

Waste Description:

A fire occurred in the 200 West Area Dry Waste Burial Ground on July 9, 1952. Surveys after the fire did not reveal any contamination spread to personnel or equipment. However, appreciable alpha contamination was found on the ground. The maximum reading was 200,000 disintegrations per minute in the burial ground and 30,000 disintegrations outside the burial ground. The burial trench contained cardboard boxes used to dispose of dry waste such as rags, paper, gloves, etc. Procedures limit the amount of plutonium to 5 grams per box, although most boxes contained less than one gram of plutonium. It was estimated that less than 500 grams of plutonium would have been present in the burial trench at the time of the fire.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-11

Site Names: UPR-200-W-11, Burial Ground Fire, UN-200-W-11, UPR-200-W-16

Reason: UPR-200-W-11 is a duplicate of UPR-200-W-16.

Site Code: UPR-200-W-26 Classification: Accepted

Site Names: UPR-200-W-26, Contamination Spread **ReClassification:**

During Burial Operation

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The release is not marked or posted. All the inactive 200 West Area burial grounds are marked **Description:** and posted Underground Radioactive Material. Only portions of the railroad tracks are currently

posted with radiological signs. No specific location or maps are included in the Radiation

Incident Investigation Report to indicate where the contamination was found.

Waste Type: Chemicals

Waste Description:

A comprehensive traverse survey was made of the burial garden and adjacent areas, the T plant railroad spur, and (following discovery of previously unsuspected railroad contamination) the main railroad line between the burial garden and Reduction Oxidation (REDOX). Survey results were as follows: general particulate contamination in and near the burial garden with spots up to 600 mrep/hour (uncorrected for source size) at the surface; numerous spots along the T plant spur of similar levels, with one spot of 15 rep/hour at surface; general particulate contamination in large areas to the southeast and southwest of the burial garden; and numerous spots on both sides of the main railroad line to REDOX having dose rates up to 2 rep/hour (uncorrected for source size) at surface. Highest concentrations of particles (greater than one particle per square yard) were found along the main line west of U plant and west of the powerhouse, and in a large area southwest of the burial garden. Analysis of three spots of contamination, taken from (1) the area southwest of the burial garden, (2) from the T plant spur, and (3) the main line near U plant, revealed the activity to be greater than 95% ruthenium.

Site Code: UPR-200-W-45 Classification: Accepted

Site Names: UPR-200-W-45, Burial Box Collapse **ReClassification:**

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site

Description:

Waste Type: Chemicals

Waste Collapse of wooden burial box containing ruthenium contaminated process equipment from **Description:** Reduction Oxidation (REDOX) during burial operations in a 200 West Area Burial Ground.

Extensive surveys revealed ground contamination of 5 to 100 particles per 0.09 square meter (5 to 100 particles per square foot). A majority of the readings were from 10,000 to greater than

80,000 counts per minute, with a maximum of 1,100 millirads/hour.

Site Code: UPR-200-W-53 Classification: Accepted

Site Names: UPR-200-W-53, Burial Box Collapse **ReClassification:**

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site

Description:

Waste Type: Equipment

Waste The release contained fission product (ruthenium-109) with beta/gamma readings that ranged

Description: from 50 millirads/hour at the burial site to 60,000 counts/minute at T Plant and readings east of

the 200 West Area fence at 400 counts/minute.

Site Code: UPR-200-W-63 Classification: Accepted

Site Names: UPR-200-W-63, Road Contamination ReClassification:

along the South Shoulder of 23rd Street,

UN-200-W-63

Site Type: Unplanned Release Start Date: 1966

Site Status: Inactive End Date:

Site The release site is not currently marked.

Description:

Waste Type: Chemicals

Waste The contamination was in the form of strontium-90 with an activity of about 1 curie. Spots of

Description: contamination up to 500 millirads/hour were removed from the road.

Site Code: UPR-200-W-72 Classification: Accepted

Site Names: UPR-200-W-72, Contamination at 218-W- **ReClassification:**

4A

Site Type: Unplanned Release Start Date: 1975

Site Status: Inactive End Date:

Site

Description:

Waste Type: Misc. Trash and Debris

Waste Gross alpha and mixed fission product with beta/gamma readings to 100,000 counts/minute and

Description: alpha readings to 70,000 disintegrations/minute were measured at the site.

Site Code: UPR-200-W-84 Classification: Accepted

Site Names: UPR-200-W-84, Ground Contamination ReClassification:

During Burial Operation

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The release site lies within a fenced area in an established radiation zone.

Description:

Waste Type: Chemicals

Waste The waste had beta and gamma contamination with readings up to 2,000 millirads/hour.

Description:

Site Code: UPR-200-W-134 Classification: Accepted

Site Names: UPR-200-W-134, Improper Drum Burial ReClassification:

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site The release site was within a fenced area at the 218-W-1 Burial Ground. The site was covered

Description: with clean soil.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The transuranic waste contained approximately 53 grams (2 ounces) of fissile material.

Description:

Site Code: UPR-200-W-137 Classification: Accepted

Site Names: UPR-200-W-137, 218-W-7, UN-200-W- ReClassification:

137

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site A vent from the vault is visible above the ground surface; the rest of the site is graveled and

Description: surrounded by yellow metal poles and a chain to mark the radiation zone.

The Site Was Consolidated With:

Site Code: 218-W-7

Site Names: 218-W-7, 222-S Vault

Reason: Duplicate Site

Site Code: 200-W-123 Classification: Rejected (Proposed)

Site Names: 200-W-123, Gravel Pit 35 ReClassification:

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:ActiveEnd Date:

Site The site is a large area of shallow excavations.

Description:

Waste Type: Soil

Waste The site is a source of clean backfill material. No waste is stored or deposited at this site.

Description:

Site Code: 200-W-13 Classification: Accepted

Site Names: 200-W-13, 2713-WB Green Hut Complex **ReClassification:**

Site Type:Maintenance ShopStart Date:Site Status:InactiveEnd Date:

Site Adjacent and near 2713-WB are areas of discolored soil (petroleum possibly). Miscellaneous **Description:** regulated equipment has been stored outside and north of 2713-WB in the past. Trash and debris

are scattered around 2713-WB (including vitrified clay pipe, wood, metal, glass, cloth, plastic, rubber, brick, and aerosol cans. There is coated (pink) steam line on south side of 2713-WB

indicating asbestos.

Waste Type: Soil

Waste Adjacent and near 2713-WB are areas of discolored soil (presumed to be petroleum products)

Description: Adjacent and near 2713-WB are areas of discolored soil (presumed to be petroleum products)
and areas with radiation protection postings. Regulated radioactive material and equipment have

and areas with radiation protection postings. Regulated radioactive material and equipment have been stored outside and north of 2713-WB. The inside of the building was the Regulated

Vehicle repair shop during the 1980's.

Site Code: UPR-200-W-76 Classification: Accepted

Site Names: UPR-200-W-76, UN-200-W-76, ReClassification:

Contamination Found at 241-TX-155

Site Type: Unplanned Release Start Date: 1977

Site Status: Inactive End Date:

Site In August 2000, the area around the 241-TX-155 and 241-TX-152 Diversion Boxes was covered

Description: with a layer of gravel and posted as a Contamination Area. A white sign with black letters

reading "UPR-200-W-76" is hanging on the chain on the north side of the 241-TX-152 Diversion

Box posted area.

Waste Type: Animal Waste

Waste Radioisotopic analyses on two individual rabbit pellets revealed: 18.6 microCuries cesium-137

Description: per gram of sample, 0.044 microCuries cesium-134 per gram of sample, 0.093 microCuries

europium-155 per gram of sample, 0.026 microCuries europium-154 per gram of sample, and

2.63 microCuries strontium-90 per gram of sample. Beta-gamma readings up to 100

millirads/hour were found.

Site Code: 221-T CSTF Classification: Accepted

Site Names: 221-T CSTF, 221-T Containment System ReClassification: Closed Out (2/22/1999)

Test Facility, T Plant Laboratory, 221-T

Head End

Site Type: Laboratory Start Date: 1964

Site Status: Inactive End Date:

Site The 221-T CSTF consisted of the head end (Section 1) of the 221-T Canyon. In 1964, a sheet

Description: metal wall was constructed to separate Section 1 from the rest of the canyon. The head end area consists of one large process cell, a control room, laboratories, a shop, a change room, and a high

bay near the cell.

Waste Type: Chemicals

Waste Wastes generated at the laboratory were intended to include alkali metal hydroxide, oxides, and **Description:** carbonates. The maximum process design capacity for tank treatment was intended to be 100

liters (26.4 gallons) per day. The 221-T never managed dangerous waste. Previous use of the facility included experiments with radiological constituents. Residual contamination may be

present.

Site Code: 221-T-5-6 Classification: Accepted

Site Names: 221-T-5-6, 221-T-TK-5-6, Tank 5-6 221-T ReClassification:

System, T Plant Complex

Site Type: Storage Tank Start Date: 1944

Site Status: Active End Date:

Site Tank 221-T-5-6 is a type 347 stainless steel tank with piping connecting the unit to other tanks in

Description: the 221-T tank system. The tank is cylindrical in shape.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant (221-T, 2706-T) decontamination operations.

Description:

Site Code: 221-T-5-7 Classification: Accepted

Site Names: 221-T-5-7, 221-T-TK-5-7, Tank 5-7 221-T **ReClassification:**

System, T Plant Complex

Site Type: Storage Tank Start Date: 1944

Site Status: Active End Date:

Site Tank 221-T-5-7 is a type 347 stainless steel tank with piping connecting the unit to other tanks in

Description: the 221-T tank system. The tank is rectangular with a flat bottom.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant (221-T, 2706-T) decontamination operations.

Description:

Site Code: 221-T-5-9 Classification: Accepted

Site Names: 221-T-5-9, 221-T-TK-5-9, Tank 5-9 221-T **ReClassification:**

System, T Plant Complex

Site Type: Storage Tank Start Date: 1944

Site Status: Active End Date:

Site Tank 221-T-5-9 is a type 347 stainless steel tank with piping connecting the unit to other tanks in

Description: the 221-T tank system. The tank is cylindrical in shape.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant (221-T, 2706-T) decontamination operations.

Description:

Site Code: 221-T-6-1 Classification: Accepted

Site Names: 221-T-6-1, 221-T-TK-6-1, Tank 6-1 221-T **ReClassification:**

System, T Plant Complex

Site Type: Storage Tank Start Date: 1944

Site Status: Active End Date:

Site Tank 221-T-6-1 is a type 347 stainless steel tank with piping connecting the unit to other tanks in

Description: the 221-T tank system. The tank is over shaped and is partially enclosed

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant (221-T, 2706-T) decontamination operations.

Description:

Site Code: 221-T-11-R Classification: Accepted

Site Names: 221-T-11-R, 221-T-TK-11-R, Tank 11-R ReClassification:

221-T System, T Plant Complex

Site Type: Storage Tank Start Date: 1944

Site Status: Active End Date:

Site Tank 221-T-11-R is a type 347 stainless steel tank with piping connecting the unit to other tanks

Description: in the 221-T tank system. The tank is oval shaped with an open top and flat bottom.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant decontamination operations.

Description:

Site Code: 221-T-15-1 Classification: Accepted

Site Names: 221-T-15-1, 221-T-TK-15-1, Tank 15-1 **ReClassification:**

221-T System, T Plant Complex

Site Type: Storage Tank Start Date: 1957

Site Status: Active End Date:

Site Tank 221-T-15-1 is a type 347 stainless steel tank with piping connecting the unit to other tanks in

Description: the 221-T tank system. The tank has an open top, a flat bottom, and is oval in shape.

Waste Type: Process Effluent

Waste The unit receives liquid mixed waste from T Plant (221-T, 2706-T) decontamination operations.

Description:

Site Code: 224-T Classification: Accepted

Site Names: 224-T, 224-T Canyon ReClassification:

Site Type: Process Unit/Plant Start Date: 1944

Site Status: Inactive End Date:

Site Access to the building is restricted. The entrance portion of the building is enclosed in a locked, **Description:** chain link fence. The east side of the building that coincides with the canyon cells has sealed

chain link fence. The east side of the building that coincides with the canyon cells has sealed doors marked A, B, C, D, E, and F. Each door is posted with Fissile Material, High Radiation,

High Contamination and Airborne Contamination signs. Adjacent to the doors, Fixed Contamination signs are posted on painted portions of the concrete facility walls. Inside the building, the canyon portion of this building has been sealed off and is not accessible.

Waste Type: Sludge

Waste In the 1940's, plutonium solutions were concentrated in the six cells in 224-T. In the 1950's, the

Description: tanks were drained and rinsed. In 2001, Non-destructive Assay analysis of nineteen tanks found

less than 2 grams of fissile material inside the tanks, except for one that contained 4 grams of

fissile material.

Site Code: 200-W-20 Classification: Accepted

Site Names: 200-W-20, T Plant Complex ReClassification:

Site Type: Process Unit/Plant Start Date: 1944

Site Status: Active End Date:

Site The T Plant Complex is enclosed within a 2.4 meter (8 foot) chain link fence. Facilities within the

Description: fence include the 221-T Canyon Building, the 2706-T Decontamination Facility, the 211-T Sump,

the 214-T Storage Building, the 277-T Storage Building, the 2715-T Material Storage Building, the 291-T Ventilation Stack Complex and several small support buildings. The T Plant Complex

is considered a RCRA Treatment and Storage Unit.

Waste Type: Process Effluent

Waste The waste consists of dangerous, hazardous and mixed waste from decontamination and

Description: treatment activities occurring in the T Plant Complex.

Site Code: 200-W-36 Classification: Accepted

Site Names: 200-W-36, TK-SQ-143, EP 211-143 ReClassification:

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1969

Site The site is a single aboveground, horizontal tank on three concrete saddles. The tank is

Description: surrounded by steel post and chain labeled with "DANGER-Hard Hat and Safety Glasses

Required" and "Radioactive Material Area" signs.

Waste Type: Chemicals

Waste A video inspection showed no free liquids and about 25.4 to 45.7 centimeters (10 to 18 inches)

Description: of solids in the tank bottom. Samples of the solids were taken April 21, 1994 and showed several hazardous constituents (lead and mercury) at concentrations greater than dangerous

waste levels. The tank contains low level radioactive material from decontamination activities at

2706-T.

Site Code: 200-W-40 Classification: Accepted

Site Names: 200-W-40, 292-T, Emission Control Lab, **ReClassification:**

Stack Gas Sampling Building

Site Type: Laboratory **Start Date: Site Status:** Inactive **End Date:**

Site The site is a grey concrete block building. Tie back side of the building is surrounded by post and

chain labeled "Contamination Area". Sign on building reads "Emission Control Laboratory 292-**Description:**

T". Surrounding area is gravel and cobble.

Waste Type: Equipment

Waste Building, equipment, underground lines

Description: Reported Date: October 9, 1995

Site Code: 200-W-45 **Classification:** Accepted

200-W-45, 291-T Sand Filter, T Plant **Site Names: ReClassification:**

Stack Sand Filter

Sand Filter **Start Date:** 1949 **Site Type:** 1979 **Site Status:** Inactive **End Date:**

The sand filter is a large, rectangular structure located north of the 291-T stack. It is posted with Site

"Contamination Area" signs. There is one vent pipe, located on the northwest corner of the filter **Description:**

structure, protruding through the top of the sand filter.

Waste Type: Soil

Using information found in PNNL document "Radionuclide Releases to the Atmosphere from Waste **Description:**

Hanford Operations, 1944-1972" (PNWD 2222 HEDR), a standard decay equation estimates the curies of radionuclides in the T Plant Sand Filter to be: 29 curies of Strontium-90, 33 curies of

Cesium-137 and 4.1 curies of Plutonium-239 (or 66 grams) as of October 1994.

Site Code: Classification: TRUSAF Accepted

TRUSAF, 224-T TRUSAF, Transuranic **Site Names: ReClassification:**

Assay Facility

Site Type:StorageStart Date:1985Site Status:InactiveEnd Date:1997

Site The building is a RCRA compliant storage unit occupying 2/3 of the 224-T building and adjacent outdoor areas. One third of the building (224-T Canyon) was sealed off in 1975. The storage

capacity is 2,000 (55-gallon) drums (110,000 gallons). Access to the building is restricted with a

locked, chain link fence.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The TRUSAF facility operation consisted of a nondestructive analysis of TRU waste. The **Description:** hazardous waste that may be allowed into this facility could be any of the listed or characteristic

wastes as defined by RCRA and Washington Administrative Code 173-303. The waste was generated by DOE processing facilities and will eventually be shipped to the WIPP in New Mexico for disposal. Prior to placing the building on standby, all of the waste was removed

from 224-T.

Site Code: 242-T Classification: Accepted

Site Names: 242-T, 242-T Evaporator Facility, 241-T **ReClassification:**

Evaporator

Site Type:EvaporatorStart Date:1950Site Status:InactiveEnd Date:1986

Site The 242-T is a reinforced concrete and structural steel building. The facility consists of the 242-T **Description:** building with the control room in the southeast portion, 242-TB and the 242-TA vault. The

evaporator portion of 242-T contains a feed cell, an evaporator vessel, a cyclone separator, a catch tank and two preheater tanks. The condensate portion contains the off-gas vessels, two condensate catch tanks and a sample gallery. The 242-TA Vault is a concrete lined pit with a ground level steel cover. A 15,120 liter (4000 gallon) receiver tank is inside the vault. This tank

received Z Plant waste.

Waste Type: Process Effluent

Waste During the 1950's, the facility concentrated separation process, first cycle decontamination waste from the tank farms. First cycle waste typically contained 10% of the original fission products

and 1% plutonium in solution with nitrates, phosphates and sulfates. From the 1960's to the late 1970's, it received single-shell supernatant waste, complexed radioactive waste, and dilute miscellaneous radioactive waste. From 1976 to 1980, the evaporator was sued to neutralize Z Plant waste. During its active life, the facility received and processed 12,820,456,000 liters

(33,652,000 gallons) of waste.

Site Code: 242-T-135 Classification: Accepted

Site Names: 242-T-135, IMUST, Inactive ReClassification:

Miscellaneous Underground Storage Tank

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date:

Site The unit is a tank partially below grade, constructed of stainless steel. An agitator and a hopper

Description: are installed on top of the tank. The tank is surrounded with steel posts and chain, located behind a steel radiation shield wall. The area surrounding the tank is posted with Contamination Area

and IMUST signs.

Waste Type: Process Effluent

Waste The content of the tank would include 242-T decontamination solutions.

Description:

Site Code: 242-T-151 Classification: Accepted

Site Names: 242-T-151, 242-T-151 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:Site Status:InactiveEnd Date:

Site This unit is constructed of reinforced concrete and is rectangular in shape.

Description:

Waste Type: Process Effluent

Waste This unit was used for the transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Site Code: 242-TA-R1 Classification: Accepted

Site Names: 242-TA-R1, 242-TA, Receiver TK-Vault, ReClassification:

242-TA Receiver Tank Vault, Z Waste, Receiver Tank TK-R1, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Receiving Vault Start Date:
Site Status: Inactive End Date:

Site The unit is a below-grade 16 foot diameter (at bottom) by 20 foot high cylindrical structure, with

Description: a 16 foot octagon-shaped top at grade level. The vault is constructed of concrete and contains a

4200 gallon tank. The surface is surrounded with a metal rail fence and labeled with IMUST

signs.

Waste Type: Process Effluent

Waste The waste reportedly contains 0.007 grams per gallon of Plutonium; 4.756 molar concentration of nitrate ion; 0.15 molar concentration of Sodium ion; 0.842 molar concentration of trivalent

Aluminum; 0.648 molar concentration of free Hydrogen atoms; 0.454 molar concentration of divalent Aluminum Fluoride; 0.180 molar concentration of bivalent Magnesium; 0.087 molar concentration of trivalent Iron; 0.059 molar concentration of Potassium ion; 0.013 molar concentration of Sulphate ion; and 0.0005 molar concentration of divalent Uranium Oxide.

Site Code: 241-TX-101 Classification: Accepted

Site Names: 241-TX-101, 241-TX-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1980

Site This unit is a second-generation underground single-shell storage tank. Tank 241-TX-101 is the

Description: first tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to this unit includes bismuth phosphate metal waste, REDOX waste, coating **Description:** waste, tributyl phosphate, and waste fractionization ion exchange waste. Other waste includes

high level and low level waste from B-Plant, non-complexed waste, PUREX low-level waste, organic wash waste, partial neutralization feed waste, and evaporator bottoms. The unit also received decontamination waste from 241-C, -BX, -SX, -TX Tank Farms.

Site Code: 241-TX-102 Classification: Accepted

Site Names: 241-TX-102, 241-TX-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1975

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-102 is the

Description: second tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-102 included bismuth phosphate metal waste, 242-T

Description: Evaporator waste, and supernatant containing REDOX high-level waste, and evaporator bottoms

from 241-TX Tanks.

Site Code: 241-TX-103 Classification: Accepted

Site Names: 241-TX-103, 241-TX-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1980

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-103 is the **Description:** third tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-103 included bismuth phosphate metal waste, 242-T

Description: Evaporator waste, noncomplexed waste, tributyl phosphate waste, and partial neutralization feed

from 241-TX Tanks.

Site Code: 241-TX-104 Classification: Accepted

Site Names: 241-TX-104, 241-TX-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1950Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-104 is the

Description: fourth tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-104 included bismuth phosphate metal waste, 242-T

Description: Evaporator waste, and supernatant containing REDOX ion exchange and high-level waste,

PUREX organic wash waste, B Plant low-level waste, and tributyl phosphate from 241-TY and

241-TX Tanks.

Site Code: 241-TX-105 Classification: Accepted

Site Names: 241-TX-105, 241-TX-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-105 is the

Description: first tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to tank 241-TX-105 included bismuth phosphate metal waste, 242-T

Description: Evaporator waste, and supernatant containing REDOX ion exchange and high-level waste, and

PUREX organic wash waste from 241-BX and 241-SX Tank Farms.

Site Code: 241-TX-106 Classification: Accepted

Site Names: 241-TX-106, 241-TX-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-106 is the

Description: second tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-106 included bismuth phosphate metal waste, tributyl

Description: phosphate waste, 242-T Evaporator waste, and supernatant containing REDOX ion exchange

and high-level waste, PUREX organic wash waste, evaporator bottoms, and coating waste from

241-TX Tanks.

Site Code: 241-TX-107 Classification: Accepted

Site Names: 241-TX-107, 241-TX-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-107 is the

Description: third tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-107 included bismuth phosphate metal waste, 242-T

Description: Evaporator waste, and REDOX high-level waste from the 241-TX Tanks.

Site Code: 241-TX-108 Classification: Accepted

Site Names: 241-TX-108, 241-TX-TK-108 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-108 is the

Description: fourth tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-108 included bismuth phosphate metal waste, REDOX high-level waste, 242-T Evaporator waste, supernatant containing decontamination waste, tributyl

phosphate waste, and evaporator bottoms from 241-TX and -TY Tanks.

Site Code: 241-TX-109 Classification: Accepted

Site Names: 241-TX-109, 241-TX-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-109 is the

Description: first tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-109 included: bismuth phosphate first-cycle waste, 242-T **Description:** Evaporator waste, and evaporator bottoms from the 241-TX, and 241-TX Tanks.

Site Code: 241-TX-110 Classification: Accepted

Site Names: 241-TX-110, 241-TX-TK-110 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-110 is the

Description: second tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-110 included bismuth phosphate first-cycle waste and 242-T

Description: Evaporator waste.

241-TX-111 Accepted **Site Code: Classification:**

241-TX-111, 241-TX-TK-111 **ReClassification: Site Names:**

Single-Shell Tank Start Date: 1950 **Site Type: Site Status:** Inactive **End Date:** 1977

This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-111 is the Site

third tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single **Description:**

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-111 included bismuth phosphate first-cycle waste, 242-T Evaporator waste, and supernatant containing tributyl phosphate waste from 241-TX Tanks. **Description:**

Site Code: 241-TX-112 **Classification:** Accepted

241-TX-112, 241-TX-TK-112 **ReClassification: Site Names:**

1950 Single-Shell Tank **Start Date: Site Type:** Inactive **End Date:** 1976 **Site Status:**

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-112 is the

fourth tank of a four-tank cascade series. This cylindrical tank is concrete-reinforced with a single **Description:**

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste transferred to Tank 241-TX-112 included 242-T Evaporator waste, bismuth phosphate Waste first-cycle waste, and supernatant containing evaporator bottoms from the 241-TX Tanks. **Description:**

Site Code: 241-TX-113 **Classification:** Accepted

241-TX-113, 241-TX-TK-113 **Site Names: ReClassification:**

Single-Shell Tank **Start Date:** 1952 **Site Type: Site Status:** Inactive **End Date:** 1976

This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-113 is the Site

first tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a single **Description:**

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank Waste Transferred to Tank 241-TX-113 included 242-T Evaporator waste and supernatant

Description: containing evaporator bottoms from 241-TX Tanks.

Site Code: 241-TX-114 Classification: Accepted

Site Names: 241-TX-114, 241-TX-TK-114 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1975

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-114 is the

Description: second tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-114 included 242-T Evaporator waste, supernatant

Description: containing bismuth phosphate first-cycle waste, and evaporator bottoms from the 241-TX Tanks.

Site Code: 241-TX-115 Classification: Accepted

Site Names: 241-TX-115, 241-TX-TK-115 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1977

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-115 is the

Description: third tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-115 included 242-T Evaporator waste, tributyl phosphate

Description: waste, coating waste, decontamination waste, and evaporator bottoms from 241-U, 241-S, 241-

T, and 241-TX Tanks.

Site Code: 241-TX-116 Classification: Accepted

Site Names: 241-TX-116, 241-TX-TK-116 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-116 is the

Description: first tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-116 included supernatant containing evaporator bottoms

Description: from 241-TX Tanks. Diatomaceous earth was added in 1969.

Site Code: 241-TX-117 Classification: Accepted

Site Names: 241-TX-117, 241-TX-TK-117 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-117 is the

Description: second tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a

single steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TX-117 included supernatant containing first-cycle waste and **Description:** evaporator bottoms from 241-TX Tanks. Diatomaceous earth was also added in 1969.

Site Code: 241-TX-118 Classification: Accepted

Site Names: 241-TX-118, 241-TX-TK-118 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1980

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TX-118 is the

Description: third tank of a three-tank cascade series. This cylindrical tank is concrete-reinforced with a single

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to tank 241-TX-118 included 242-T Evaporator feed tank waste, 234-Z and

Description: 235-Z Buildings waste, caustic solution, tributyl phosphate waste, decontamination waste,

bismuth phosphate first-cycle waste, evaporator bottoms, partial neutralization feed, and coating

waste from the 241-T, 241-TX, 241-TY, and 241-U Tank Farms.

Site Code: 241-TX-153 Classification: Accepted

Site Names: 241-TX-153, 241-TX-153 Diversion Box **ReClassification:**

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solution from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box

Site Code: 241-TX-302A Classification: Accepted

Site Names: 241-TX-302A, 241-TX-302-A Catch Tank, ReClassification:

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Catch TankStart Date:1949Site Status:InactiveEnd Date:1982

Site This unit is an underground, horizontal cylindrical tank made of steel. The tank farm surface has

Description: been covered with gravel. The tank is surrounded with posts and chain and labeled with IMUST

signs.

Waste Type: Process Effluent

Waste This tank collected waste solution spills that occurred during transfers from processing and decontamination operations via the 241-TX-153 Diversion Box. Volumes collected were

variable according to specific plant operations. In 1994, it was estimated the tank contained approximately 113 liters (30 gallons) of supernate liquid and 9261 liters (2450 gallons) of

sludge.

Site Code: 241-TX-302XB Classification: Accepted

Site Names: 241-TX-302XB, 241-TX-302B Catch ReClassification:

Tank, 241-TX-302-X, 241-TX-302-X (B),

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Catch Tank Start Date:

Site Status: Inactive End Date: 1985

Site This unit is a horizontal, cylindrical tank made of carbon steel. The tank is surrounded with posts

Description: and chain and labeled with IMUST signs. The tank is buried underground to provide radiation

shielding.

Waste Type: Storage Tank

Waste This unit was used for containment of waste solution spills that occurred during transfers from

Description: processing and decontamination operations.

Site Code: 244-TX DCRT Classification: Accepted

Site Names: 244-TX DCRT, 244-TX Double-Contained ReClassification:

Receiver Tank, 244-TX RT, 244-TX

Receiver Tank, 244-TX Receiver Vessel,

244-TX-TK/SMP

Site Type: Receiver Tank Start Date: 1981

Site Status: Active End Date:

Site This unit is a horizontal, cylindrical vessel that sets in a reinforced concrete, steel-lined vault.

Description:

Waste Type: Process Effluent

Waste transferred to this unit include T Plant decontamination waste, Plutonium Finishing Plant

Description: waste, and waste solution stored in the 241-T Tank Farms.

Site Code: 241-TXR-151 Classification: Accepted

Site Names: 241-TXR-151, 241-TXR-151 Diversion **ReClassification:**

Box

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of radioactive waste solutions from processing and

Description: decontamination operations. Contamination in the diversion box is estimated to be high in

alpha, beta and gamma radiation. It is estimated that approximately 23 kilograms (50 pounds) of

lead shielding may be stored in each diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-TXR-152 Classification: Accepted

Site Names: 241-TXR-152, 241-TXR-152 Diversion ReClassification:

Box

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site This unit is constructed of reinforced concrete and is rectangular in shape. The 241-TXR-152 has

Description: been weather covered.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-TXR-153 Classification: Accepted

Site Names: 241-TXR-153, 241-TXR-153 Diversion ReClassification:

Box

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site This unit is constructed of reinforced concrete and is rectangular in shape. The 241-TXR-153 has

Description: been weather covered.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination operations. Volumes were variable according to specific plant operations. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 244-TXR VAULT Classification: Accepted

Site Names: 244-TXR VAULT, 244-TXR, 244-TXR ReClassification:

Vault (Tanks TXR-001, -002, -003), IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Receiving VaultStart Date:1950Site Status:InactiveEnd Date:1957

The 244-TXR Vault is a rectangular, reinforced concrete pit. The vault is surrounded with post and chain and marked with IMUST signs. The vault houses three steel storage tanks (244-TK-

TXR-1, -TXR-2, and TXR-3; see "Subsite" sections). The 244-TK-TXR-1 Tank has a 50,000 gallon (189,000 liter) capacity and the 244-TK-TXR-2 and TXR-3 each have a 15,000 gallon (56,800 liters) capacity. The vault is buried to a depth that places the upper surface of its lid

about 12 inches (30.5 centimeters) above grade.

Waste Type: Chemicals

Waste The unit received waste uranium slurry generated from T-Plant via the 241-T and 241-TX Tank

Description: Farms.

Waste Type: Equipment

Waste Equipment associated with the 244-TXR Vault includes the steel tanks, piping, nozzles, and

Description: other miscellaneous equipment.

SubSites:

SubSite Code: 244-TXR VAULT:

SubSite Name: 244-TXR VAULT:1, 244-TXR-001

Classification: Accepted

ReClassification:

Description: Tank 244-TXR-0001 is located in a concrete cell, inside the 244-TXR Vault. The cell is 6.7

meters (22 feet) by 7.9 meters (26 feet) by 8.8 meters (28.8 feet). The tank is 6.1 meters (20 feet) tall and 6.1 meters (20 feet) in diameter. The tank has a 189,000 liter (50,000 gallon) capacity. The tank was used as a slurry accumulator for bismuth phosphate waste from tanks in T and TX farms. The tank is isolated and stabilized. Samples were collected and analyzed in 1984 from both the tank and the sump. Results included 1.05 micro curies/liter Total Alpha, 4,510 micro curies/liter Total Beta, and 4,490 micro curies/liter cesium-137- GEA. 0.108 N0-2 and 0.442 N03 were noted without units. Hanford Occurrence Report 79-68

indicates this tank is of questionable integrity.

SubSite Code: 244-TXR VAULT:

SubSite Name: 244-TXR VAULT:2, 244-TXR-002

Classification: Accepted

ReClassification:

Description: Tank 244-TXR-002 is located in a concrete cell, inside the 244-TXR Vault. The cell is 4.9

meters (16 feet) by 6.1 meters (20 feet) by 5.8 meters (19 feet). The tank is 3.7 meters (12 feet) tall and 4.3 meters (14 feet) in diameter. It has a 56,775 liter (15,000 gallon) capacity.

The tank was used to acidify material for the uranium recovery process. Slurry was transferred from tank 001 and nitric acid was added prior to being pumped to U-Plant. The tank is isolated and stabilized. The tank contains 11,147 liters (2945 gallons) of sludge and no supernate. Samples were collected and analyzed in 1975 from the tank and had a dose rate of 1.5 R/hr. Results included 0.72 micro curies/liter Pu, 100 micro curies/liter Cs-134,

22,000 micro curies/liter Cs-137 and 10 micro curies/liter Sr-90. There was also 630 mg/L

Al, 19,400 mg.L Na, 82,500 mg/L NO3 and 110 mg/L Cl.

SubSite Code: 244-TXR VAULT:

SubSite Name: 244-TXR VAULT:3, 244-TXR-003

Classification: Accepted

ReClassification:

Description: Tank 244-TXR-003 is located in a concrete cell, inside the 244-TXR Vault. The cell is 4.9

meters (16 feet) by 6.1 meters (20 feet) by 5.8 meters (19 feet). The tank is 3.7 meters (12 feet) tall and 4.3 meters (14 feet) in diameter. It has a 56,775 liter (15,000 gallon) capacity.

The tank was used to acidify material for the uranium recovery process. Slurry was

transferred from tank 001 and nitric acid was added prior to being pumped to U-Plant. The tank is isolated and stabilized. The tank contains 26,450 liters (6460 gallons) of sludge and no

supernate. No sample information is mentioned.

Site Code: 241-TY-101 Classification: Accepted

Site Names: 241-TY-101, 241-TY-TK-101 ReClassification:

Site Type: Single-Shell Tank Start Date: 1953

Site Status: Inactive End Date: 1973

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TY-101 is the

Description: first tank of a two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-

roofed with a steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TY-101 included bismuth phosphate first-cycle waste, tributyl

Description: phosphate waste, and evaporator bottoms from 241-TY, -TX, and -SX Tank Farms.

Site Code: 241-TY-102 Classification: Accepted

Site Names: 241-TY-102, 241-TY-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1979

Site This unit is a second-generation, underground single-shell storage tank. Tank 241-TY-102 is the

Description: second tank of a two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-

roofed with a steel liner lying across the tank bottom and up the tank wall. The tank is buried

underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TY-102 included supernatant containing B Plant low-level waste,

Description: REDOX high-level waste, PUREX organic wash waste, REDOX ion exchange waste, and

evaporator bottoms from 241-TX and -TY Tank Farms.

Site Code: 241-TY-103 Classification: Accepted

Site Names: 241-TY-103, 241-TY-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1976

Site This unit is a second-generation single-shell storage tank. Tank 241-TY-103 is the first tank of a **Description:** two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TY-103 included, bismuth phosphate first-cycle waste, tributyl

Description: phosphate waste, PUREX organic wash waste, REDOX ion exchange waste, coating waste,

evaporator bottoms, and decontamination waste from 241-BX, -T, -TX, -TY, and -AX Tank

Farms.

Site Code: 241-TY-104 Classification: Accepted

Site Names: 241-TY-104, 241-TY-TK-104 ReClassification:

Site Type: Single-Shell Tank Start Date: 1953

Site Status: Inactive End Date: 1974

Site This unit is a second-generation single-shell storage tank. Tank 241-TY-104 is the second tank of **Description:** a two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a

a two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-TY-104 included tributyl phosphate waste, REDOX ion **Description:** exchange waste, PUREX organic wash waste, bismuth phosphate first-cycle waste, and

decontamination waste from 241-TX and -TY Tank Farms.

Site Code: 241-TY-105 Classification: Accepted

Site Names: 241-TY-105, 241-TY-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1960

Site This unit is a second-generation single-shell storage tank. Tank 241-TY-105 is the first tank of a

Description: two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Tank 241-TY-105 received tributyl phosphate waste.

Description:

Site Code: 241-TY-106 Classification: Accepted

Site Names: 241-TY-106, 241-TY-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1953Site Status:InactiveEnd Date:1959

Site This unit is a second generation single-shell storage tank. Tank 241-TY-106 is the second tank of

Description: a two-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a

steel liner lying across the tank bottom and up the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Tank 241-TY-106 contains tributyl phosphate waste. Diatomaceous earth was added in 1969. **Description:**

Site Code: 241-TY-153 Classification: Accepted

Site Names: 241-TY-153, 241-TY-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1953Site Status:InactiveEnd Date:1981

This unit is constructed of reinforced concrete and is rectangular in shape. Site

Description:

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solution from processing and decontamination

operations. Lead shielding may also be contained inside the diversion box. **Description:**

Waste Type: Equipment

Equipment associated with the diversion box includes transfer piping and nozzles. Waste

Description:

Equipment Waste Type:

Waste Waste lead is stored in the diversion box.

Description:

241-TY-302A **Site Code: Classification:** Accepted

Site Names: 241-TY-302A, 241-TY-302-A Catch Tank, **ReClassification:**

IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Catch Tank **Start Date:** 1953 **Site Status:** Inactive **End Date:** 1981

This unit is a horizontal, cylindrical tank made of steel. The tank is surrounded with post and Site chain and marked with IMUST signs. The tank is buried underground to provide radiation **Description:**

shielding.

Waste Type: Process Effluent

This tank collected overflow waste solutions from processing and decontamination operations Waste **Description:**

that passed through the 241-TY-153 Diversion Box. Volumes were variable according to

specific plant operation. The volume is unknown and not monitored.

Site Code: 241-TY-302B **Classification:** Accepted

Site Names: 241-TY-302B, 241-TY-302-B Catch Tank, **ReClassification:**

> IMUST, Inactive Miscellaneous Underground Storage Tank

1953 **Site Type:** Catch Tank **Start Date:** 1981 **Site Status:** Inactive **End Date:**

This unit is a horizontal, cylindrical tank made of steel. The tank is surrounded with post and Site

chain and marked with IMUST signs. The tank is buried underground to provide radiation **Description:**

shielding.

Storage Tank **Waste Type:**

Waste This unit accepted overflow waste solutions from processing and decontamination operations.

Description: Volumes were variable according to specific plant operation. Site Code: 200-W-94 Classification: Accepted

Site Names: 200-W-94, Contaminated Soil at 241- ReClassification:

TX/TY Tank Farm

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is the soil inside and adjacent to the chain link fence that surrounds the 241-TX/TY Tank Farm complex. Various radiological postings and warning signs are attached to the chain link

fence. The interior of the tank farm complex is covered with gravel. Many risers and monitoring devices for the underground structures are visible on the surface. The individual unplanned releases associated with the 241-TX/TY Tank Farms are not separately marked or posted.

Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence,

resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. A portion of the 242-T Evaporator building is located inside the

tank farm fence.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne **Description:** contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-12

Site Names: UPR-200-W-12, Ground Contamination near 242-T

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-17

Site Names: UPR-200-W-17, UN-200-W-17, Contamination Spread form 241-TX-106 Pump Removal

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-100

Site Names: UPR-200-W-100, UN-216-W-8, 105-TX to 118-TX Process Line Leak, UN-200-W-100

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-126

Site Names: UPR-200-W-126, Contamination Release inside 241-TX Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-129

Site Names: UPR-200-W-129, Contamination Release Inside 241-TX Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-149

Site Names: UPR-200-W-149, 241-TX-107 Leak

Within Boundary Of Larger Site Reason:

Site Code: UPR-200-W-150

Site Names: UPR-200-W-150, 241-TY-103 Leak Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-151

UPR-200-W-151, 241-TY-104 Leak **Site Names:** Reason: Within Boundary Of Larger Site

UPR-200-W-152 **Site Code:**

Site Names: UPR-200-W-152, 241-TY-105 Leak Within Boundary Of Larger Site Reason:

Site Code: UPR-200-W-153

Site Names: UPR-200-W-153, 241-TY-106 Leak Reason: Within Boundary Of Larger Site

Site Code: 2607-WT **Classification:** Accepted

2607-WT, 241-T-601 Control Bldg. Tile **Site Names:**

Field

Site Type: Septic Tank **Start Date:** 1952

Site Status: Inactive **End Date:**

Site The 2607-WT Septic Tank is surrounded by a chain link fence and is marked with Miscellaneous

Inactive Storage Facility (MISF) signs and two WIDS waste site signs. This septic tank is **Description:**

connected to a sanitary tile field.

Waste Type: Sanitary Sewage

The current flow rate for the 2607-WT septic system is unknown. The 2607-WT septic system Waste **Description:**

received sanitary wastewater and sewage at an estimated rate of 0.71 cubic feet (0.02 cubic

ReClassification:

meters) per day in 1987.

Site Code: 2607-WTX **Classification:** Accepted

ReClassification: Site Names: 2607-WTX

Site Type: Septic Tank **Start Date:** 1950

Site Status: Inactive **End Date:**

The 2607-WTX Septic Tank and associated sanitary tile field are surrounded by a light chain link Site

Description: fence.

Waste Type: Sanitary Sewage **Waste** The current flow rates for the 2607-WTX system are unknown. This unit received sanitary sewer effluent at an estimated rate of 26 cubic feet (0.74 cubic meters) per day in 1987.

Site Code: UPR-200-W-12 Classification: Accepted

Site Names: UPR-200-W-12, Ground Contamination ReClassification: Rejected (Consolidation) (6/13/

near 242-T

Site Type:Unplanned ReleaseStart Date:1951Site Status:InactiveEnd Date:1951

Site The site consists of contaminated soil located on the south side of the 242-T Evaporator Building

Description:

Waste Type: Process Effluent

Waste Waste is described as "a few gallons" of concentrate and originated from the 242-T Evaporator.

Description: "A maximum dose rate of 2 rads per hour at a distance of 5 centimeters was observed on the

contaminated area.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-17 Classification: Accepted

Site Names: UPR-200-W-17, UN-200-W-17, ReClassification: Rejected (Consolidation) (6/13/

Contamination Spread form 241-TX-106

Pump Removal

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site The release occurred inside the tank farm fence. The tank farm is surrounded with a chain link

Description: fence and radiological warning signs. The release is not separately marked or posted.

Waste Type: Chemicals

Waste Contamination consisted of cerium, cesium, nobelium, ruthenium, strontium, and zirconium.

Description: After the wind had subsided, the southern area of the 241-TX tank farm was found to be

contaminated generally up to 6,000 c/m with isolated spots up to 50,000c/m. The "major construction zone" immediately south of the 241-TX area had lesser amounts of contamination up to 2000c/m with a maximum of 35,000 c/m detected. Less than 1 g of solvent was dispersed

by the wind.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-100 Classification: Accepted

Site Names: UPR-200-W-100, UN-216-W-8, 105-TX to ReClassification: Rejected (Consolidation) (6/13/

118-TX Process Line Leak, UN-200-W-100

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

The release occurred inside the 241-TX Tank Farm. The tank farm is surrounded with a chain link fence and has been stabilized with gravel. The release is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of first-cycle, high-salt, neutral to basic waste containing fission products with a maximum dose rate of 4.5 rad per hour at a distance of 1.2 meters (4 feet). The waste

contained approximately 10 curies of fission products.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-126 Classification: Accepted

Site Names: UPR-200-W-126, Contamination Release ReClassification: Rejected (Consolidation) (6/13/

inside 241-TX Tank Farm

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site The tank farm that is surrounded by a chain link fence and is posted with radiological warning

Description: signs, including Underground Radioactive Material, Radiation Area, Fixed Contamination Area,

Radiological Buffer Area and Radioactive Material Area. The release site is not separately

marked of posted.

Waste Type: Process Effluent

Waste Spotty contamination became airborne. The employee received contamination levels reading up

Description: to 2,000 counts per minute.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-129 Classification: Accepted

Site Names: UPR-200-W-129, Contamination Release ReClassification: Rejected (Consolidation) (6/13/

Inside 241-TX Tank Farm

Site Type: Unplanned Release Start Date: 1971

Site Status: Inactive End Date: 1971

Site The personnel contamination incident release occurred inside the fenced 241-TX Tank Farm. The

Description: release site is not separately marked or posted.

Waste Type: Process Effluent

Waste The waste was a caustic radioactive solution. The contamination on the employee had readings

Description: up to 30,000 counts per minute.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-149 Classification: Accepted

Site Names: UPR-200-W-149, 241-TX-107 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type: Unplanned Release Start Date: 1977
Site Status: Inactive End Date: 1977

Site The release is the soil adjacent to the 241-TX-107 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste Assuming the waste came from 241-TX-107, the release would contain bismuth phosphate metal

Description: waste, REDOX high-level waste, and evaporator bottoms from the 242-T Evaporator.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-150 Classification: Accepted

Site Names: UPR-200-W-150, 241-TY-103 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type: Unplanned Release Start Date: 1953
Site Status: Inactive End Date: 1973

Site The release is the soil adjacent to the 241-TY-103 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The waste contained in tanks 241-TY-103 and 241-TY-105 included 700 curies of cesium-137

Description: from bismuth phosphate process waste, PUREX organic wash waste, REDOX ion exchange

waste, coating waste and evaporator bottoms.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-151 Classification: Accepted

Site Names: UPR-200-W-151, 241-TY-104 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1974

Site The release site is the soil adjacent to the 241-TY-104 Tank. The release is not separately marked

Description: or posted.

Waste Type: Process Effluent

Waste The tank contained REDOX ion exchange waste, PUREX organic wash waste, bismuth

Description: phosphate first-cycle waste, tributyl phosphate waste, and decontamination waste from the 241-

TX and the 241-TY Tank Farms.

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-152 Classification: Accepted

Site Names: UPR-200-W-152, 241-TY-105 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1960Site Status:InactiveEnd Date:1960

Site The release is the soil adjacent to the 241-TY-105 Tank. The release is not separately marked or

Description: posted.

Waste Type: Process Effluent

Waste The release consisted of tributyl phosphate containing 4,000 curies of cesium-137.

Description:

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-153 Classification: Accepted

Site Names: UPR-200-W-153, 241-TY-106 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1959

Site The release is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste The release consisted of tributyl phosphate process waste.

Description:

The Site Was Consolidated With:

Site Code: 200-W-94

Site Names: 200-W-94, Contaminated Soil at 241-TX/TY Tank Farm

Reason: Within Boundary Of Larger Site

200-TP-6

Site Code: 241-T-101 Classification: Accepted

Site Names: 241-T-101, 241-T-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1944Site Status:InactiveEnd Date:1979

Site This unit is a first generation, underground single-shell storage tank. Tank 241-T-101 is the first tank of a cascade that also includes tanks 241-T-102 and 241-T-103. The tank is cylindrical,

dome-roofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the

concrete wall. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste sources for 241-T-101 include coating waste from Tank 241-SX-106, coating and ion

Description: exchange waste from B Plant, and metal waste from T Plant operations.

Site Code: 241-T-102 Classification: Accepted

Site Names: 241-T-102, 241-T-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1945Site Status:InactiveEnd Date:1976

Site This unit is a first generation, underground single-shell storage tank. Tank 241-T-102 is the

Description: second tank of a cascade that also includes tanks 241-T-101, and 241-T-103. The tank is

cylindrical, dome roofed, concrete reinforced with a steel liner lying across the tank bottom and

up the concrete wall. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste sources for the 241-T-102 include coating waste from Tank 241-SX-106, coating and ion

Description: exchange waste from B Plant, and metal waste from the T Plant operations.

Site Code: 241-T-103 Classification: Accepted

Site Names: 241-T-103, 241-T-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1945Site Status:InactiveEnd Date:1974

Site This unit is a first generation, underground single-shell storage tank. Tank 241-T-103 is the third

Description: and final tank of a cascade that also includes tanks 241-T-101 and 241-T-102. The tank is a

cylindrical, dome roofed, concrete reinforced structure with a steel liner lying across the tank

bottom and up the concrete wall. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste in Tank 241-T-103 include bismuth phosphate metal waste, low level coating and

Description: supernate from the B Plant, REDOX ion exchange, REDOX high level waste, and evaporation

bottoms.

Site Code: 241-T-104 Classification: Accepted

Site Names: 241-T-104, 241-T-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1974

Site This unit is a first generation, underground single-shell storage tank. Tank 241-T-104 is the first

Description: tank of the second cascade of tanks receiving waste in the T Farm. Tank 241-T-105 and 106 are

the second and third tanks in the series.

Waste Type: Storage Tank

Waste Tank 241-T-104 received bismuth phosphate first cycle waste.

Description:

Site Code: 241-T-105 Classification: Accepted

Site Names: 241-T-105, 241-T-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1976

This unit is a first generation, underground single-shell tank. Tank 241-T-105 is the second tank **Description:** of the second cascade of tanks receiving waste in the 241-T Farm. The tank is cylindrical, dome-

of the second cascade of tanks receiving waste in the 241-T Farm. The tank is cylindrical, domeroofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete

wall. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste sources include bismuth phosphate first-cycle and second-cycle waste, REDOX coating

Description: waste, Hanford Laboratory operations waste, supernatant containing low-level waste, and ion

exchange waste.

Site Code: 241-T-106 Classification: Accepted

Site Names: 241-T-106, 241-T-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1973

Site This unit is a first generation, underground single-shell tank. Tank 241-T-106 is the third tank of

Description: the second cascade of tanks receiving waste in the 241-T-Farm. The tank is cylindrical, dome-

roofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete

well. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste types transferred to Tank 241-T-106 include bismuth phosphate first cycle waste, **Description:** supernatant containing coating waste, low-level waste from B Plant, and ion exchange waste.

Site Code: 241-T-107 Classification: Accepted

Site Names: 241-T-107, 241-T-TK-107 ReClassification:

Single-Shell Tank **Start Date:** 1944 **Site Type: Site Status:** Inactive **End Date:** 1976

Site This unit is a first generation, underground single-shell tank. Tank 241-T-107 is the first tank of

the third cascade of tanks receiving waste in the T-Farm. The tank is cylindrical, dome-roofed, **Description:**

and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete well.

This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste types transferred to Tank 241-T-107 include first cycle bismuth phosphate waste, tributyl

Description: phosphate, ion exchange waste, and coating waste.

Site Code: 241-T-108 **Classification:** Accepted

241-T-108, 241-T-TK-108 **ReClassification: Site Names:**

Single-Shell Tank **Start Date:** 1945 **Site Type: Site Status:** Inactive **End Date:** 1974

Site This unit is a first generation, underground single-shell tank. Tank 241-T-108 is the second tank

Description: of the third cascade of tanks receiving waste in the T-Farm. The tank is cylindrical, dome-roofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete well.

This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste types transferred to Tank 241-T-108 include: tributyl phosphate, bismuth phosphate first-**Description:**

cycle waste, Hanford Laboratory operations waste, supernatant containing tributyl phosphate

waste, B Plant low-level waste, ion exchange waste, and evaporator bottoms.

Site Code: 241-T-109 **Classification:** Accepted

Site Names: 241-T-109, 241-T-TK-109 **ReClassification:**

1945 **Site Type:** Single-Shell Tank **Start Date: End Date:** 1974 **Site Status:** Inactive

This unit is a first generation, underground single-shell tank. Tank 241-T-109 is the third tank of Site **Description:**

the third cascade of tanks receiving waste in the T Farm. The tank is cylindrical, dome-roofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete wall.

This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste types transferred to Tank 241-T-109 include: bismuth phosphate first-cycle waste, Waste

Description: tributyl phosphate waste, evaporator bottoms, B Plant low-level waste, ion exchange waste, and

waste from 241-T and -TX tank farms.

241-T-110 **Site Code: Classification:** Accepted

Site Names: 241-T-110, 241-T-TK-110 **ReClassification:**

Single-Shell Tank **Start Date:** 1944 **Site Type: End Date:** 1976 **Site Status:** Inactive

This unit is a first generation, underground single-shell tank. Tank 241-T-110 is the first tank of Site the fourth cascade of tanks receiving waste in the T Farm. The tank is cylindrical, dome-roofed, **Description:**

and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete wall.

This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste types transferred to 241-T-110 include bismuth phosphate second-cycle waste and the Waste

Description: 224-U Building waste.

Site Code: 241-T-111 Classification: Accepted

Site Names: 241-T-111, 241-T-TK-111 **ReClassification:**

Single-Shell Tank **Start Date:** 1945 **Site Type:** 1974 **Site Status:** Inactive **End Date:**

Site This unit is a first generation, underground single-shell tank. Tank 241-T-111 is the second tank

of the fourth cascade of tanks receiving waste in the T Farm. The tank is cylindrical, dome-**Description:**

roofed, and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete

wall. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste types transferred to Tank 241-T-111 include: bismuth phosphate second-cycle waste and

Description: 224-U Building waste.

Site Code: 241-T-112 **Classification:** Accepted

241-T-112, 241-T-TK-112 **ReClassification: Site Names:**

Site Type: Single-Shell Tank **Start Date:** 1946 **Site Status:** Inactive **End Date:** 1976

Site This unit is a first generation, underground single-shell tank. Tank 241-T-112 is the third tank of

Description: the fourth cascade of tanks receiving waste in the T Farm. The tank is cylindrical, dome-roofed,

and concrete-reinforced with a steel liner lying across the tank bottom and up the concrete wall.

This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste types transferred to Tank 241-T-112 include: bismuth phosphate second-cycle waste, **Description:** Pacific Northwest Laboratory waste, decontamination waste; and supernatant containing B Plant

low-level waste and ion exchange waste from the 241-T tank.

Site Code: 241-T-151 **Classification:** Accepted

Site Names: 241-T-151, 241-T-151 Diversion Box **ReClassification:**

Start Date: 1944 **Site Type:** Diversion Box

Site Status: Inactive End Date: 1980

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles. Waste lead is

Description: also stored in the diversion box.

Site Code: 241-T-152 Classification: Accepted

Site Names: 241-T-152, 241-T-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1944Site Status:InactiveEnd Date:1983

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the 241-T-152 Diversion Box includes transfer piping and nozzles.

Description: Waste lead is also stored in the diversion box.

Site Code: 241-T-153 Classification: Accepted

Site Names: 241-T-153, 241-T-153 Diversion Box **ReClassification:**

Site Type:Diversion BoxStart Date:Site Status:InactiveEnd Date:

Site The diversion box is a rectangular reinforced concrete structure. Most of the structure is below

Description: ground. A few inches of the structure that extends above ground is covered with a gray weather

coating. The tank farm fence is posted with various radiological postings.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with this unit include transfer piping and nozzles. Waste lead is also

Description: stored in the diversion box.

Site Code: 241-T-201 Classification: Accepted

Site Names: 241-T-201, 241-T-TK-201 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is an underground, concrete-reinforced vertical single-shell tank. Tank 241-T-201 has a steel liner and rests upon a concrete base slab. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste in Tank 241-T-201 is from the 224 Building.

Description:

Site Code: 241-T-202 Classification: Accepted

Site Names: 241-T-202, 241-T-TK-202 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is an underground, concrete-reinforced vertical single-shell tank. Tank 241-T-202 has a steel liner and rests upon a concrete base slab. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste in Tank 241-T-202 is from the 224 Building.

Description:

Site Code: 241-T-203 Classification: Accepted

Site Names: 241-T-203, 241-T-TK-203 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is an underground, concrete-reinforced vertical single-shell tank. Tank 241-T-203 has a steel liner and rests upon a concrete base slab. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste in Tank 241-T-203 is from the 224 Building.

Description:

Site Code: 241-T-204 Classification: Accepted

Site Names: 241-T-204, 241-T-TK-204 ReClassification:

Site Type:Single-Shell TankStart Date:1952Site Status:InactiveEnd Date:1976

Site This unit is an underground, concrete-reinforced vertical single-shell tank. Tank 241-T-204 has a steel liner and rests upon a concrete base slab. This unit is below grade for shielding purposes.

Waste Type: Storage Tank

Waste Waste in Tank 241-T-204 is from the 224 Building.

Description:

Site Code: 241-T-252 Classification: Accepted

Site Names: 241-T-252, 241-T-252 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1944Site Status:InactiveEnd Date:1983

Site This unit is a reinforced concrete structure, constructed mostly below grade. The 241-T-252 has a **Description:** concrete cover block with lifting bails. The diversion box has been entirely coated with protective

foam.

Waste Type: Process Effluent

Waste This unit transported various mixed waste solutions from processing and decontamination

Description: operations. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be

stored in each diversion box.

Waste Type: Equipment

Waste Transfer piping and nozzles are associated with the 241-T-252 Diversion Box.

Description:

Waste Type: Equipment

Waste Waste lead is also stored in the diversion box.

Description:

Site Type:

Site Code: 241-T-301B Classification: Accepted

Site Names: 241-T-301B, 241-T-301 Catch Tank, 241- ReClassification:

T-301-B, 241-T-0301, IMUST, Inactive Miscellaneous Underground Storage Tank

Catch Tank Start Date: 1944

Site Status: Inactive End Date: 1985

Site The 241-T-301B Catch Tank is an underground, reinforced concrete tank. The tank is surrounded

Description: with posts and chain and labeled with IMUST signs. This unit has a concrete-domed lid and uses

a vertical construction design. The catch tank is below grade for shielding purposes.

Waste Type: Process Effluent

Waste This tank collected overflow radioactive process waste from 241-T-252, 241-T-151, 241-T-152

Description: and 241-T-153 Diversion Boxes.

Site Code: 241-T-302 Classification: Accepted

Site Names: 241-T-302, 241-T-302 Catch Tank ReClassification: Rejected (9/18/2002)

Site Type: Catch Tank Start Date:
Site Status: Inactive End Date:

Site Although this tank has been listed in the Tri Party Agreement (appendix B), it has been verified

Description: that this tank does not exist.

Site Code: 241-TR-152 Classification: Accepted

Site Names: 241-TR-152, 241-TR-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1944Site Status:InactiveEnd Date:1980

Site This unit is constructed of reinforced concrete and is rectangular in shape.

Description:

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Site Code: 241-TR-153 Classification: Accepted

Site Names: 241-TR-153, 241-TR-153 Diversion Box, ReClassification:

241-TR-153 Booster Pump Pit

Site Type:Diversion BoxStart Date:1944Site Status:InactiveEnd Date:1983

Site This unit is constructed of reinforced concrete and is rectangular in shape.

Description:

Waste Type: Chemicals

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operation.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste

Waste lead is stored in the diversion box.

Description:

Site Code: 200-W-93 Classification: Accepted

Site Names: 200-W-93, Contaminated Soil at 241-T

Tank Farm

ReClassification:

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Description:

Site

The site is the soil inside and adjacent to the chain link fence that surrounds the 241-T Tank Farm. Various radiological postings and warning signs are attached to the chain link fence. The interior of the tank farm complex is covered with gravel. Many risers and monitoring devices for the underground structures are visible on the surface. The 216-T-7 and 216-T-32 Cribs are located inside the tank farm fence and are marked with "Crib" signs. The 216-T-7 Tile Field is partially inside the tank farm, but most of it extends westward, beyond the fence line. The individual unplanned releases associated with the 241-T Tank Farm are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. A posted Underground Radioactive Material area currently

extends outside the 241-T Tank Farm fence on the west side.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne **Description:** contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-W-7

Site Names: UPR-200-W-7, Contamination Spread from the 241-T-151 and 241-T-152 Diversion Boxes,

UN-200-W-7

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-147

Site Names: UPR-200-W-147, 241-T-103 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-148

Site Names: UPR-200-W-148, 241-T-106 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-7 Classification: Accepted

Site Names: UPR-200-W-7, Contamination Spread from ReClassification: Rejected (Consolidation) (6/13/

the 241-T-151 and 241-T-152 Diversion

Boxes, UN-200-W-7

Site Type: Unplanned Release Start Date: 1950

Site Status: Inactive End Date:

Site The release occurred inside the 241-T Tank Farm. The Tank Farm is surrounded with a chain

Description: link fence and posted with radiological warning signs. The diversion boxes have been covered

with a protective foam layer. The unplanned release is not separately marked or posted.

Waste Type: Process Effluent

Waste Dried, loose specks spread from the diversion box and contaminated the surrounding area.

Description:

The Site Was Consolidated With:

Site Code: 200-W-93

Site Names: 200-W-93, Contaminated Soil at 241-T Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-62 Classification: Accepted

Site Names: UPR-200-W-62, UN-200-W-62, Line Leak ReClassification:

at 23rd and Camden, UN-216-W-5, Duplicate of UPR-200-W-97

_ **...**

Site Type: Unplanned Release Start Date: 1966

Site Status: Inactive End Date:

Site The area has been stabilized with gravel. It is surrounded with Underground Radioactive Material

Description: signs.

Waste Type: Chemicals

Waste Contaminated second-cycle waste consisting of bismuth phosphate, with readings from 20 to

Description: 5,000 millirads/hour.

Site Code: UPR-200-W-147 Classification: Accepted

Site Names: UPR-200-W-147, 241-T-103 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type: Unplanned Release Start Date: 1973

Site Status: Inactive End Date:

Site The release is the soil under the 241-T-103 Tank. It is not separately marked or posted.

Description:

Waste Type: Process Effluent

Waste In 1973, the release contained 1 microcurie/liter of ruthenium.

Description:

The Site Was Consolidated With:

Site Code: 200-W-93

Site Names: 200-W-93, Contaminated Soil at 241-T Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-148 Classification: Accepted

Site Names: UPR-200-W-148, 241-T-106 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The release is the soil underneath and adjacent to the 241-T-106 Tank. The release is not

Description: separately marked or posted.

Waste Type: Process Effluent

Waste At the time the release occurred, the tank contained waste with approximately 40,000 curies of cesium-137, 14,000 curies of strontium-90, 4 curies of plutonium, and various fission products.

The Site Was Consolidated With:

Site Code: 200-W-93

Site Names: 200-W-93, Contaminated Soil at 241-T Tank Farm

Reason: Within Boundary Of Larger Site

200-TW-1

Site Code: 216-B-14 Classification: Accepted

Site Names: 216-B-14, 216-BC-1 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1956

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs and the 216-BC-

Description: 201 siphon tank were surface stabilized as a single area. All the surface structures (risers and vents) have been removed. The area has been covered with clean soil and posted as an

Underground Radioactive Material area. There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U

Description: Building during uranium recovery operations. The waste is high in salt and is neutral to basic.

The waste contained inorganic compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-15 Classification: Accepted

Site Names: 216-B-15, 216-BC-2 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1957

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs were surface

Description: stabilized as a single area. All the surface structures (risers and vents) have been removed. The

area has been covered with clean soil and posted as an Underground Radioactive Material area.

There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building

Description: during uranium recovery operations. The waste is high in salt and is neutral to basic. The waste

contained inorganic compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-16 Classification: Accepted

Site Names: 216-B-16, 216-BC-3 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1956

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs were surface

Description: stabilized as a single area. All the surface structures (risers and vents) have been removed. The

area has been covered with clean soil and posted as an Underground Radioactive Material area.

There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U

Description: Building. The waste is high in salt and is neutral to basic. The waste contained inorganic

compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-17 Classification: Accepted

Site Names: 216-B-17, 216-BC-4 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1956

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs were surface

Description: stabilized as a single area. All the surface structures (risers and vents) have been removed. The area has been covered with clean soil and posted as an Underground Radioactive Material area.

There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U

Description: Building. The waste is high in salt and is neutral to basic. The waste contained inorganic

compounds such as ferrocyanide, nitrate and phosphate. Curren (1972) states that the 216-B-17

crib received tank farm first cycle scavenged waste in January 1956.

Site Code: 216-B-18 Classification: Accepted

Site Names: 216-B-18, 216-BC-5 Crib ReClassification:

Site Type:CribStart Date:1956Site Status:InactiveEnd Date:1956

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs were surface

Description: stabilized as a single area. All the surface structures (risers and vents) have been removed. The

area has been covered with clean soil and posted as an Underground Radioactive Material area.

There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant from 221-U Building.

Description: The waste is high in salt and is neutral to basic. The waste contained inorganic compounds such

as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-19 Classification: Accepted

Site Names: 216-B-19, 216-BC-6 Crib ReClassification:

Site Type:CribStart Date:1957Site Status:InactiveEnd Date:1957

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs were surface

Description: stabilized as a single area. All the surface structures (risers and vents) have been removed. The

area has been covered with clean soil and posted as an Underground Radioactive Material area.

There are concrete AC 540 markers to identify the site.

Waste Type: Process Effluent

Waste Description:

The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U Building. The waste is high in salt and is neutral to basic. The waste contained inorganic compounds such as ferrocyanide, nitrate and phosphate. Curren (1972) states that the 216-B-19 crib received both U Plant and Tank Farm scavenged waste.

Site Code: 216-B-20 Classification: Accepted

Site Names: 216-B-20, 216-BC-7 Trench, 216-B-20 ReClassification:

Trench

Site Type:TrenchStart Date:1956Site Status:InactiveEnd Date:1956

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered

Description: with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations.

Waste Type: Process Effluent

Waste The site received scavenged waste from uranium recovery (tributyl phosphate [TBP] solvent extraction from the 221-U Building). The waste is high in salt and is neutral to basic. It

included inorganic compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-21 Classification: Accepted

Site Names: 216-B-21, 216-BC-8 Trench, 216-B-21 ReClassification:

Trench

Site Type:TrenchStart Date:1956Site Status:InactiveEnd Date:1956

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U

Description: Building. The waste is high in salt and is neutral to basic. The waste includes inorganic

compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-22 Classification: Accepted

Site Names: 216-B-22, 216-BC-9 Trench, 216-B-22 ReClassification:

Trench

Site Type: Trench Start Date: 1956
Site Status: Inactive End Date: 1956

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations. The trench was divided into 19 meters (62.5 foot) sections by 0.6-meter (2 foot) high earth dams. The side slope is 1:1.5. The depth was designed to be 3.7 meters (12 feet), but some documents report

approximately 1.8 meters (6 feet).

Waste Type: Process Effluent

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate

Site Code: 216-B-23 Classification: Accepted

216-B-23, 216-BC-10 Trench, 216-B-23 **ReClassification: Site Names:**

Trench

Site Type: Trench **Start Date:** 1956 **Site Status:** Inactive **End Date:** 1956

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site **Description:** with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations. The trench is divided into eight 19-meter (62.5-foot) sections by 1.2-meter (4-foot) high earth dams.

The unit has a 1:1.5 side slope.

Process Effluent **Waste Type:**

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste

Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate

216-B-24 **Classification: Site Code:** Accepted

Site Names: 216-B-24, 216-BC-11 Trench, 216-B-24 **ReClassification:**

Trench

Site Type: Trench **Start Date:** 1956 1956 **Site Status:** Inactive **End Date:**

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site **Description:** with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations The trench is divided into eight 19-meter (62.5-foot) sections by 1.2-meter (4-foot) high earthen

dams. It has a 1.5:1 side slope.

Waste Type: Process Effluent

The site received the scavenged tributyl phosphate (TBP) supernatant from 221-U Building. Waste

Description: The waste is high in salt and is neutral to basic. It contained inorganic compounds such as

ferrocyanide, nitrate and phosphate.

Site Code: 216-B-25 Classification: Accepted

ReClassification: Site Names: 216-B-25, 216-BC-12 Trench, 216-B-25

Trench

Trench **Start Date:** 1956 **Site Type: Site Status:** Inactive **End Date:** 1956

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site

Description:

with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The trench is divided into eight 19-meter (62.5-foot) sections by 1.2-meter (4-foot) high earthen

dams. It has a 1.5:1 side slope.

Waste Type: Process Effluent

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-26 **Classification:** Accepted

216-B-26, 216-BC-13 Trench, 216-B-26 **ReClassification: Site Names:**

Trench

Site Type: Trench **Start Date:** 1956 **Site Status:** Inactive **End Date:** 1957

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers **Description:**

outline the area where the trenches are located, but do not identify specific trench locations. The trench is divided into eight 19-meter (62.5-foot) sections by 1.2-meter (4-foot) high earthen

dams. It has a 1.5:1 side slope.

Waste Type: Process Effluent

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste **Description:**

Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds

such as ferrocyanide, phosphate and nitrate

Site Code: 216-B-27 **Classification:** Accepted

Site Names: 216-B-27, 216-BC-14 Trench, 216-B-27 **ReClassification:**

Trench

Site Type: Trench **Start Date:** 1957 **End Date:** 1957 **Site Status:** Inactive

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered Site with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers **Description:**

> outline the area where the trenches are located, but do not identify specific trench locations. The trench is divided into eight 19-meter (62.5-foot) sections, separated by 1.2-meter (4-foot) high

earthen dams. It has a 1.5:1 side slope.

Waste Type: Process Effluent

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste Building. The waste is high in salt and is neutral to basic. It included inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate

Site Code: 216-B-28 **Classification:** Accepted

Site Names: 216-B-28, 216-BC-15 Trench, 216-B-28 **ReClassification:**

Trench

Trench **Start Date:** 1957 **Site Type: Site Status:** Inactive **End Date:** 1957

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered **Description:** with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations. The trench construction divided it into eight 19-meter (62.5-foot) sections, separated by 1.2-meter (4-

foot) high earthen dams. It has a 1.5:1 side slope.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U **Description:** Building. The waste is high in salt and is neutral to basic. The waste contained inorganic

compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-29 **Classification:** Accepted

ReClassification: Site Names: 216-B-29, 216-BC-16 Trench

Site Type: Trench **Start Date:** 1957 **End Date: Site Status:** Inactive 1957

Site **Description:** The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has been backfilled and the area has been surface stabilized.

The trench was a long narrow excavation with a 1:1.75 side slope. It was divided crosswise into two equal sections by an earthen dam. The dam was 1.5 meters (5 feet) high and 1.5 meters (5 feet) wide at the top. A 10.2 centimeter (4 inch) Schedule 40 pipe ran along the top edge of the trench. Four 7.62-centimeter (3-inch) Schedule 40 pipe sections extended laterally from the 10.2centimeter (4-inch) pipe, down the side slope into the trench. Liquid discharge into the trench was controlled by gate valves located at the top of the lateral lines. A cover, constructed of 1 by 6 and 2 by 4 wood framing and sisalkraft paper, extended the length of the trench. The vertical distance from the cover to the trench bottom was a minimum of 1.5 meters (5 feet).

Process Effluent Waste Type:

The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U Waste **Description:**

Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-30 **Classification:** Accepted

Site Names: 216-B-30, 216-BC-17 Trench, 216-B-30 **ReClassification:**

Trench

Site Type:TrenchStart Date:1957Site Status:InactiveEnd Date:1957

Site Description:

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has been backfilled and the area has been surface stabilized.

The trench was a long narrow excavation with a 1:1.75 side slope. It was divided crosswise into two equal sections by an earthen dam. The dam was 1.5 meters (5 feet) high and 1.5 meters (5 feet) wide at the top. A 10.2 centimeter (4 inch) Schedule 40 pipe ran along the top edge of the trench. Four 7.62-centimeter (3-inch) Schedule 40 pipe sections extended laterally from the 10.2-centimeter (4-inch) pipe, down the side slope into the trench. Liquid discharge into the trench was controlled by gate valves located at the top of the lateral lines. A cover, constructed of 1 by 6 and 2 by 4 wood framing and sisalkraft paper, extended the length of the trench. The vertical distance from the cover to the trench bottom was a minimum of 1.5 meters (5 feet).

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U

Description: Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-31 Classification: Accepted

Site Names: 216-B-31, 216-BC-18 Trench, 216-B-31 ReClassification:

Trench

Site Type:TrenchStart Date:1957Site Status:InactiveEnd Date:1957

Description:

The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has been backfilled and the area has been surface stabilized.

The trench was a long narrow excavation with a 1:1.75 side slope. It was divided crosswise into two equal sections by an earthen dam. The dam was 1.5 meters (5 feet) high and 1.5 meters (5 feet) wide at the top. A 10.2 centimeter (4 inch) Schedule 40 pipe ran along the top edge of the trench. Four 7.62-centimeter (3-inch) Schedule 40 pipe sections extended laterally from the 10.2-centimeter (4-inch) pipe, down the side slope into the trench. Liquid discharge into the trench was controlled by gate valves located at the top of the lateral lines. A cover, constructed of 1 by 6 and 2 by 4 wood framing and sisalkraft paper, extended the length of the trench. The vertical distance from the cover to the trench bottom was a minimum of 1.5 meters (5 feet).

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U

Description: Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-32 **Classification:** Accepted

216-B-32, 216-BC-19 Trench, 216-B-32 **ReClassification: Site Names:**

Trench

Trench **Start Date:** 1957 **Site Type: Site Status:** Inactive **End Date:** 1957

Site **Description:** The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has been backfilled and the area has been surface stabilized.

The trench was a long narrow excavation with a 1:1.75 side slope. It was divided crosswise into two equal sections by an earthen dam. The dam was 1.5 meters (5 feet) high and 1.5 meters (5 feet) wide at the top. A 10.2 centimeter (4 inch) Schedule 40 pipe ran along the top edge of the trench. Four 7.62-centimeter (3-inch) Schedule 40 pipe sections extended laterally from the 10.2centimeter (4-inch) pipe, down the side slope into the trench. Liquid discharge into the trench was controlled by gate valves located at the top of the lateral lines. A cover, constructed of 1 by 6 and 2 by 4 wood framing and sisalkraft paper, extended the length of the trench. The vertical distance from the cover to the trench bottom was a minimum of 1.5 meters (5 feet).

Process Effluent Waste Type:

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-33 Classification: Accepted

Site Names: 216-B-33, 216-BC-20 Trench, 216-B-33 **ReClassification:**

Trench

Site Type: Trench **Start Date:** 1957 **Site Status:** Inactive **End Date:** 1957

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered **Description:**

with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has been

backfilled and the area has been surface stabilized.

Process Effluent **Waste Type:**

The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U Waste Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds **Description:**

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-34 **Classification:** Accepted

Site Names: 216-B-34, 216-BC-21 Trench **ReClassification:**

Site Type: Trench **Start Date:** 1957 Site Status: Inactive End Date: 1957

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered

Description: with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers outline the area where the trenches are located, but do not identify specific trench locations. The site is a trench that was used for disposal of medium-activity liquid waste. The trench has

been backfilled and the area has been surface stabilized.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U

Description: Building. The waste is high in salt and is neutral to basic. It contained inorganic compounds

such as ferrocyanide, nitrate and phosphate.

Site Code: 216-B-42 Classification: Accepted

Site Names: 216-B-42, 241-BX-8 Grave, 216-BX-8 ReClassification:

Trench, 216-B-42 Trench

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from the 221-U

Description: Building via the 241-BY tank farm. The waste is high in salt and is neutral to basic.

Site Code: 216-B-43 Classification: Accepted

Site Names: 216-B-43, 216-BY-1 Crib, 216-BY-1 ReClassification:

Cavern

Site Type:CribStart Date:1954Site Status:InactiveEnd Date:1954

The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs are surrounded concrete AC-540 markers and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U

Description: Building. The waste is high in salt and is neutral to basic. It included inorganic compounds

such as ferrocyanide, nitrate and phosphate. (active in November 1954)

Site Code: 216-B-44 Classification: Accepted

Site Names: 216-B-44, 216-BY-2 Crib, 216-BY-2 ReClassification:

Cavern

Site Type: Crib Start Date: 1954

Site Status: Inactive End Date: 1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building.

Description: The waste is high in salt and is neutral to basic. It included inorganic compounds such as

ferrocyanide, nitrate and phosphate. (active December 1954 - March 1955)

Site Code: 216-B-45 Classification: Accepted

Site Names: 216-B-45, 216-BY-3 Crib, 216-BY-3 ReClassification:

Cavern

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received the scavenged tributyl phosphate (TBP) supernatant waste from 221-U

Description: Building. The waste is high in salt and is neutral to basic. It included inorganic compounds

such as ferrocyanide, nitrate and phosphate. (active April - June 1955)

Site Code: 216-B-46 Classification: Accepted

Site Names: 216-B-46, 216-BY-4 Crib, 216-BY-4 ReClassification:

Cavern

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building.

Description: The waste is high in salt and is neutral to basic. It included inorganic compounds such as

ferrocyanide, nitrate and phosphate. (active September - December 1955)

Site Code: 216-B-47 Classification: Accepted

Site Names: 216-B-47, 216-BY-5 Crib, 216-BY-5 ReClassification:

Cavern

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building.

Description: The waste is high in salt and is neutral to basic. It included inorganic compounds such as

ferrocyanide, nitrate and phosphate. (Active September 1955)

Site Code: 216-B-48 Classification: Accepted

Site Names: 216-B-48, 216-BY-6 Crib, 216-BY-6 ReClassification:

Cavern

Site Type: Crib Start Date: 1955 Site Status: Inactive End Date: 1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building.

Description: The waste is high in salt and is neutral to basic. It included inorganic compounds such as

ferrocyanide, nitrate and phosphate (active November 1955 through February 1957)

Site Code: 216-B-49 Classification: Accepted

Site Names: 216-B-49, 216-BY-7 Crib, 216-BY-7 ReClassification:

Cavern

Site Type:CribStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-B-43 through 216-B-50 cribs were stabilized as a unit with gravel. The group of cribs

Description: are surrounded with light chain and posted Underground Radioactive Material.

Waste Type: Process Effluent

Waste The site received scavenged tributyl phosphate (TBP) supernatant waste from 221-U Building.

Description: The waste is high in salt and is neutral to basic. It included inorganic compounds such as

ferrocyanide, nitrate and phosphate. (Active November-December 1955)

Site Code: 216-B-51 Classification: Accepted

Site Names: 216-B-51, 216-BY-9 Crib ReClassification:

Site Type:French DrainStart Date:1956Site Status:InactiveEnd Date:1958

Site The site is a small Underground Radioactive Material area measuring approximately 3 meters by

Description: 3 meters (10 feet by 10 feet). The concrete drain structure extends approximately 0.3 meters (1

foot) above the ground surface. The structure is approximately 1.5 meters (5 feet) in diameter

with a wooden lid.

Waste Type: Process Effluent

Waste The site received drainage from the BC Crib pipeline. The pipeline carried high salt, neutral to **Description:** basic scavenged tributyl phosphate waste via 241-BY tank farm to the BC Crib area. The site

contains less than 10 curies total beta.

Site Code: 216-B-52 Classification: Accepted

Site Names: 216-B-52, 216-B-52 Trench, 216-BC-22 ReClassification:

Site Type:TrenchStart Date:1957Site Status:InactiveEnd Date:1958

Site The BC trenches were surface stabilized as a unit. The backfilled trenches have been covered with clean soil and posted as Underground Radioactive Material. Concrete AC 540 markers

outline the area where the trenches are located, but do not identify specific trench locations.

Waste Type: Process Effluent

Waste The site received scavenged waste from the uranium recovery process in 221-U (tributyl phosphate [TBP] solvent extraction). The waste is high in salt and is neutral to basic. It

contained inorganic compounds such as ferrocyanide, nitrate and phosphate.

Site Code: 216-BY-201 Classification: Accepted

Site Names: 216-BY-201, 241-BY Flush Tank, 216-BY- ReClassification:

47, Supernatant Disposal Flush Tank, IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type:Settling TankStart Date:1954Site Status:InactiveEnd Date:1955

Site The unit is an underground tank that is not discernible from the surface. It is located within an Underground Radioactive Material area and has a sign stating "Restricted Access - 216-BY-201"

and "IMUST" (Inactive Miscellaneous Underground Storage Tank). There is one metal covered manhole visible at the tank site and no visible riseres or vents. A steel monitoring pit, located

near the southeast corner of the tank, is visible and may be identified by a steel cover.

Waste Type: Process Effluent

Waste The unit received radioactive waste from the 241-BY Tank Farm and the TBP Waste Line.

Pescription: Radiological constituents include strontium and cesium with their associated decay products,

Radiological constituents include strontium and cesium with their associated decay products, yttrium and barium. Chemical waste includes nitrate, sodium, aluminum, carbonate and

hydroxide.

Site Code: 200-E-14 Classification: Accepted

Site Names: 200-E-14, 216-BC-201 Siphon Tank, 216- ReClassification:

B-201, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type:Storage TankStart Date:1956Site Status:InactiveEnd Date:1957

Site The 216-B-14, 216-B-15, 216-B-16, 216-B-17, 216-B-18 and 216-B-19 cribs and the 216-BC
Description: 201 siphon tank were surface stabilized as a single area. All the surface structures (risers and

vents) have been removed. There are concrete AC 540 markers to identify the site. The vents were visible until 1981 when the area was surface stabilized. The vent risers were removed at ground level and the area was covered with at least 0.6 meters (2 feet) of additional top soil. The

area is posted as Underground Radioactive Material.

Waste Type: Process Effluent

Waste Most of the liquid waste dispersed through this tank originated from the Uranium Recovery

Description: Process in 221-U (U-Plant). The process reclaimed the uranium metal from the tank farm waste

derived from the bismuth phosphate fuel processing activities. Curren (1972) states that 216-B-17 and 216-B-19 also received scavenged tank farm waste. The waste includes ferrocyanide, phosphate, cesium, strontium, uranium, cobalt and ruthenium. The total effluent to the six cribs that passed through the 216-BC-201 Siphon Tank was 3.896E+07 liters (1.032E+07 gallons). At the time of discharge (1956), the total radionuclide activity for all six cribs equaled 26 curies of cobalt-60, 1,840 curies of cesium-137, 1,850 curies of strontium-90, 70 grams of plutonium

and 1,410 kilograms (640 pounds) of uranium.

Site Code: 200-E-49 Classification: Rejected (4/20/2000)

Site Names: 200-E-49, Borrow Pit North of BC Cribs **ReClassification:**

and Trenches

Site Type: Depression/Pit (nonspecific) Start Date: 1981

Site Status: Inactive End Date:

Site The site is a shallow, scraped area located north of the BC Trenches. The borrow pit is currently located inside the boundary of the BC Radiologically Controlled Area (alias UPR-200-E-83).

Site Code: 200-E-114 Classification: Accepted

Site Names: 200-E-114, Pipeline From 241-BY Tank **ReClassification:**

Farm to 241-C Tank Farm and BC Cribs

Trenches, 2805-E, 216-BC-2805

Site Type: Tank Farm Process Piping Start Date: 1952
Site Status: Inactive End Date: 1954

Site The site is an underground pipeline leading from the 241-BY Tank Farm to the 241-C Tank Farm Description: and the BC Cribs and Trenches Area. The pipeline is constructed of two 8 centimeter (4 inch)

diameter steel pipes. The pipeline is posted as an "Underground Radioactive Pipeline" with signs on steel fence posts over the entire length of the pipeline except for areas where roads cross the site. Several areas of growing contaminated vegetation and contaminated soil have been identified on this pipeline. These areas have been surface stabilized and also posted with

Underground Radioactive Material signs.

Waste Type: Soil

Waste The waste is the pipeline and adjacent soil contaminated from pipeline leaks.

Description:

Site Code: 216-T-18 Classification: Accepted

Site Names: 216-T-18, Test Crib for 221-U Building, **ReClassification:**

Scavenged TBP Waste, 216-T-17, 241-T-

17 Crib

Site Type: Crib Start Date: 1953
Site Status: Inactive End Date: 1953

Site The site is marked with concrete AC-540 markers. The site is posted as an "Underground

Description: Radioactive Material" area. The surface is covered with gravel.

Waste Type: Process Effluent

Waste There is a discrepancy in the historical documentation of the waste disposed to this crib. Some **Description:** references state the site received a test batch of ferrocyanide scavenged tri-butyl phosphate waste

from 221-U in December 1953. The waste was high in salt, neutral to basic, and contained nitrate, sodium silicate, sodium, sodium hydroxide, sodium aluminate, fluoride, sulfate, phosphate and nitrite. Maxfield (1979) states the crib received a million liters of first cycle

waste from 221-T that included 1800 grams of plutonium.

Site Code: 216-T-26 Classification: Accepted

Site Names: 216-T-26, 216-TY-1 Cavern, 216-TY-1 ReClassification:

Crib, 241-TX-1 Cavern, 216-TX-1 Crib

Site Type: Crib Start Date: 1955

Site Status: Inactive End Date: 1956

Site The 216-T-26, 216-T-27 and 216-T-28 cribs are enclosed within a common steel post and chain

Description: barricade that is posted "Underground Radioactive Material". The 216-TY-201 flush tank is

located in the northeast corner of the area. Two small concrete pads are located east of the crib

area.

Waste Type: Process Effluent

Waste The site received first-cycle scavenged supernatant waste from T Plant containing ferrocyanide,

Description: fluoride, nitrate, nitrite, phosphate, sodium, sodium aluminate, sodium hydroxide, sodium

silicate and sulfate.

Site Code: UPR-200-E-9 Classification: Accepted

Site Names: UPR-200-E-9, Liquid Overflow at 216-BY- ReClassification:

201, UN-200-E-9

Site Type: Unplanned Release Start Date: 1955

Site Status: Inactive End Date:

Site The site has been surface stabilized with gravel and is posted as an Underground Radioactive

Description: Material area.

Waste Type: Process Effluent

The 216-BY-201 Flush Tank leaked supernatant waste from the tributyl phosphate (TBP) process to the ground. Waste

Description:

200-TW-2

Site Code: 216-B-5 Classification: Accepted

Site Names: 216-B-5, 241-B-361 Reverse Well, 241-B- ReClassification:

361 Dry Well, 241-B-5 Dry Well, 299-E28-

29

Site Type:Injection/Reverse WellStart Date:1945Site Status:InactiveEnd Date:1947

Site The site is delineated with concrete AC-540 markers. It is posted with Underground Radioactive

Description: Material signs. The surface is covered with coarse rock.

Waste Type: Process Effluent

Waste Until September 1946, the site received supernatant overflow from 241-B-361 Settling Tank

Description: waste via Tank 5-6 in 221-B Building and liquid waste from 224-B Building. From September

1946 to October 1947, the site received the cell drainage and other liquid waste via Tank 5-6 in 221-B. The 224-B effluent was rerouted to the new 216-B-7A Cribs. The waste was low in salt

and was neutral to basic. Approximately 2.15 kilograms (4.7 pounds) of plutonium was

discharged to the reverse well.

Site Code: 216-B-7A&B Classification: Accepted

Site Names: 216-B-7A&B, 241-B-201 Crib, 216-B-7 ReClassification:

Crib, 216-B-7A Sump, 216-B-7B Sump, 241-B-1 and 2 Cribs, 216-B-7A & B

Site Type:CribStart Date:1946Site Status:InactiveEnd Date:1967

Site The cribs are located beneath a larger area of scraped contaminated soil from the UPR-200-E-144

Description: stabilization. The contaminated soil from the unplanned release area and the cribs were covered with clean backfill and posted with Underground Radioactive Material signs. The crib locations

are identified with light post and chain with Cave-in Potential signs.

Waste Type: Process Effluent

Waste The site received the liquid waste from 221-B and 224-B via overflow of 201-B Settling Tanks.

Description: From September 1946 through October 1947, the cribs received waste from 224-B. From

October 1947 to August 1948, the site received the 224-B waste stream plus cell drainage (tank 5-6) and other liquid waste from 221-B. From August 1948 to July 1951, the site received liquid waste from 224 B. The tank 5.6 waste was diverted to the 216 B. 9 Crib. From July 1951.

waste from 224-B. The tank 5-6 waste was diverted to the 216-B-9 Crib. From July 1951 through December 1954, the cribs continued to receive waste from 224-B. In December 1954 the cribs exceeded their infiltration capacity and the waste was diverted to the 216-B-8 Crib. From December 1954 to October 1961, the site received Cell 5-6 drainage and equipment cleanout waste from 224-B. From October 1961 to May 1967, the site received decontamination and construction waste from 221-B. In May 1967 it was determined that the cribs has reached their radionuclide capacity and were terminated. The B Plant effluent was rerouted to the 216-B-

12 Crib. The waste is low in salt, neutral to basic, and contains transuranic (TRU) fission

products.

Site Code: 216-B-8 Classification: Accepted

Site Names: 216-B-8, 241-B-3 Crib, 216-B-8, 216-B- **ReClassification:**

8TF

Site Type:CribStart Date:1948Site Status:InactiveEnd Date:1954

Site The crib and tile field are identified with concrete AC-540 monuments and posted with **Description:** Underground Radioactive Material signs. The crib is delineated with light post and chain with

Cave-In Potential signs. The surface is covered with gravel.

Waste Type: Process Effluent

Waste Description:

From February 1948 through July 1951, the site received second-cycle waste supernatant from 221-B Building. In August 1948, sludge from the 241-B-104 tank was inadvertently released to the crib and the crib became plugged. The sludge contanined roughly 1000 times the amount of plutonium and 5000 times the fission products as would be found in the supernate usually discharged to cribs. Acid was added to the crib in an attempt to unplug the crib. The acid did not significantly improve the crib blockage so the tile field was added to receive crib overflow. From July 1951 to December 1951, the site received the second cycle waste plus cell drainage stored in Tank 5-6 and other liquid waste from in 221-B Building. From December 1951 to December 1952, the site received decontamination and cleanup waste generated during the shutdown of 221-B and 224-B. The pipeline to the 216-B-8 Crib was blanked and the effluent routed to 216-B-7A in December 1954. The waste is high in salt, is neutral to basic, and contains transuranic (TRU) waste and fission products.

Site Code: 216-B-9 Classification: Accepted

Site Names: 216-B-9, 241-B-361 Crib, 5-6 Crib and ReClassification:

Tile Field, 216-B-361 Crib, 216-B-9TF

Site Type:CribStart Date:1948Site Status:InactiveEnd Date:1951

Site The crib and tile field have been surface stabilized. It is marked and posted as an Underground **Description:** Radioactive Material (URM) area. The crib is located in the south end of the posted URM area.

It is separately marked and posted as a Radiologically Controlled Area, Cave-in Potential. The

surface has been planted with wheat grass.

Waste Type: Process Effluent

Waste The site received cell drainage and other liquid waste via Tank 5-6 in 221-B Building. The **Description:** waste is low in salt, neutral to basic, and contains transuranic (TRU) and fission products. A

sample of the sediments collected in 1949 through a well casing revealed 1830 microcuries per kilogram of fission products and 14,800,000 disintegrations per minute per kilogram of alpha

contamination.

Site Code: 216-B-35 Classification: Accepted

Site Names: 216-B-35, 241-BX-1 Grave, 216-BX-1 ReClassification:

Trench, 216-B-35 Trench

Site Type: Trench Start Date: 1954

Site Status: Inactive End Date: 1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received first-cycle supernatant waste from 221-B Building. The waste is high in salt

Description: and is neutral to basic.

Site Code: 216-B-36 Classification: Accepted

Site Names: 216-B-36, 241-BX-2 Grave, 216-BX-2 ReClassification:

Trench, 216-B-36 Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received first-cycle supernatant waste from 221-B Building. The waste is high in salt

Description: and is neutral to basic.

Site Code: 216-B-37 Classification: Accepted

Site Names: 216-B-37, 241-BX-3 Grave, 216-BX-3 ReClassification:

Trench, 216-B-37 Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received evaporator bottom waste from the 242-B Waste Evaporator after it had processed B Plant first cycle waste. The waste is high in salt and is neutral to basic.

Site Code: 216-B-38 Classification: Accepted

Site Names: 216-B-38, 241-BX-4 Grave, 216-BX-4 ReClassification:

Trench, 216-B-38 Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received first-cycle supernatant waste from 221-B Building. The waste is high in salt

Description: and is neutral to basic.

Site Code: 216-B-39 Classification: Accepted

Site Names: 216-B-39, 241-BX-5 Grave, 216-BX-5 ReClassification:

Trench, 216-B-39 Trench

Site Type: Trench Start Date: 1953
Site Status: Inactive End Date: 1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received first-cycle supernatant waste from 221-B Building. The waste is high in salt

Description: and is neutral to basic.

Site Code: 216-B-40 Classification: Accepted

Site Names: 216-B-40, 241-BX-6 Grave, 241-BX-6 ReClassification:

Trench, 216-B-40 Trench, 216-BX-6

Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received first-cycle supernatant waste from the 221-B Building. The waste is high in

Description: salt and is neutral to basic.

Site Code: 216-B-41 Classification: Accepted

Site Names: 216-B-41, 241-BX-7 Grave, 216-BX-7 ReClassification:

Trench, 216-B-41 Trench

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

The 216-B-35 through 216-B-42 trenches were surface stabilized as a unit. The area is marked Site

Description: with concrete AC-540 posts and Underground Radioactive Material signs. The surface has been

planted with wheat grass.

Waste Type: Process Effluent

Waste The site received the first-cycle supernatant waste from the 221-B Building. The waste is high

in salt and is neutral to basic. **Description:**

Site Code: 241-B-361 Classification: Accepted

Site Names: 241-B-361, 241-B-361 Settling Tank, **ReClassification:**

> IMUST, Inactive Miscellaneous Underground Storage Tank

Site Type: Settling Tank **Start Date:** 1945 **Site Status:** Inactive **End Date:** 1947

The site is delineated with light post and chain. It is posted with Underground Radioactive Site **Description:**

Material and Inactive Miscellaneous Underground Storage Tank signs. The surface is covered

with coarse rock.

Waste Type: Sludge

The unit received low salt, alkaline radioactive liquid wastes from cell washings collected in the Waste **Description:** 5-6W Cells in 221-B and low level concentrator condensate from the 224-B facility. Although

some reports estimate the quantity of waste in the tank as 121,000 liters (32,000 gallons), the unit is now estimated to contain 83,000 liters (22,000 gallons) of sludge containing 2.46 kilograms (5.42 pounds) of plutonium and 1.060 curies beta/gamma. The tank solids are primarily bismuth phosphate residue described as black in color with a pudding like

consistency. The current volume is unknown and not monitored. The tank contents was sampled in 1979. The sludge contained 3.4 micro curies/gram of Pu-239, 1.4 micro curies/gram of Cs-137, and 23 micro curies/gram of SR-90. The liquid contained 6.1 E-7 micro curies/ml of Pu-

239, 2.5 E-3 micro curies/ml of Cs-137, and 3.1 E-5 micro curies/ml of Sr-90.

Site Code: 200-E-45 **Classification:** Accepted

200-E-45, HI Shaft, Health Instrument **ReClassification: Site Names:**

Shaft, Contaminated Pump Run-in Caisson

Site Type: Depression/Pit (nonspecific) **Start Date:** 1948 1973 **Site Status:** Inactive **End Date:**

The site is a concrete shaft, 16.6 meters (55 feet) deep. It is constructed of prefabricated concrete Site **Description:**

sections, 2.4 meters (8 feet) in diameter and 1.9 meters (6 feet 2 inches) high. Steel pipes were installed laterally through holes in the side of the shaft at 3 meters (10 feet) and 6 meters (20 feet) from the surface toward the 216-B-8 Crib. The pipes were 15 centimeters (6 inches) in diameter, and 6.6 meters (22 feet) long. The site currently is topped with a large circular cover with a smaller "manhole" entry marked with a Confined Space sign, a hatch and a vent pipe. The shaft

area is surrounded by light duty posts and chain and is posted as a Contamination Area.

Waste Type: Process Effluent Waste Description:

The shaft was used to obtain samples from the 216-B-8 Crib. The bottom of the shaft occasionally collected a significant amount of crib seepage that was pumped out of the shaft and back to the crib. Later the shaft was intermittently filled with water and used as a contaminated pump testing pit.

Site Code: 216-T-3 Classification: Accepted

Site Names: 216-T-3, 241-T-361-A Reverse Well, 361- ReClassification:

T Reverse Well

Site Type:Injection/Reverse WellStart Date:1945Site Status:InactiveEnd Date:1946

Site The 216-T-3 identified with concrete AC-540 makers and Underground Radioactive Material

Description: signs. The reverse well is constructed of steel pipe extending deep into the ground. There are two wells inside the posted area. The one on the north side of the posted area has a cap with the

remnants of a gauge. The one near the southwest side of the area has a plain well cap.

Waste Type: Process Effluent

Waste The reverse well received 221-T and 224-T liquid waste via the 241-T-361 settling tank. The **Description:** waste included cell drainage from tank 5-6 in 221-T and 224-T waste. The chemical inventory

includes nitrate, potassium, sodium, ammonium nitrate, sodium oxalate, fluoride, sulfate and phosphate. The radionuclide inventory includes 3350 grams of plutonium and 2800 curies of

fission products.

Site Code: 216-T-5 Classification: Accepted

Site Names: 216-T-5, 216-T-5 Grave, 216-T-12, 216-T- **ReClassification:**

5 Trench, 241-T-5 Trench

Site Type:TrenchStart Date:1955Site Status:InactiveEnd Date:1955

Site The 216-T-5 trench is marked and posted with Underground Radioactive Material signs.

Description:

Waste Type: Process Effluent

Waste The site received second cycle supernate waste that contained nitrate, sodium silicate, sodium,

Description: ammonium nitrate, fluoride, sulfate, and phosphate.

Site Code: 216-T-6 Classification: Accepted

Site Names: 216-T-6, 241-T-361 (1&2 Cribs), 216-T-5, **ReClassification:**

361-T-1&2 Cribs

Site Type:CribStart Date:1946Site Status:InactiveEnd Date:1951

Site The 216-T-6 Cribs are delineated with light post and chain and Cave-in Potential signs. The area

Description: is surrounded with concrete AC-540 markers and Underground Radioactive Material signs.

Waste Type: Process Effluent

The cribs received waste from 221-T and 224-T that was low in salt, neutral to basic and Waste **Description:** contained nitrate, sodium, ammonium nitrate, sodium oxalate, fluoride, sulfate, and phosphate.

Site Code: 216-T-7 Classification: Accepted

Site Names: 216-T-7, 216-T-7TF, 216-T-7 Tile Field, **ReClassification:**

241-T-3 Tile Field

Site Type: Drain/Tile Field **Start Date:** 1948 **Site Status: End Date:** 1955 Inactive

Site The 216-T-7 Tile Field is delineated with concrete AC-540 markers and posted with

Description: Underground Radioactive Material signs.

Waste Type: Process Effluent

The site received second-cycle supernatant waste from the 221-T Building until June 1951 via Waste the 241-T-110, 241-T-111 and 241-T-112 tanks. From June 1951 to June 1952, the site **Description:**

received the 221-T Building effluent plus cell drainage from Tank 5-6 in the 221-T Building. From June 1952 to November 1955, the site received the 221-T Building effluent plus waste from the 224-T Building. The waste is high in salt and is neutral to basic and contains nitrate,

potassium, sodium, ammonium nitrate, sodium oxalate, fluoride, sulfate, and phosphate.

Site Code: 216-T-14 **Classification:** Accepted

ReClassification: 216-T-14, 241-T-1 Trench, 216-T-1 Grave, **Site Names:**

216-T-13

Start Date: 1954 **Site Type:** Trench **End Date:** 1954 **Site Status:** Inactive

Site The 216-T-14, 216-T-15, 216-T-16 and 216-T-17 trenches were surface stabilized as a unit. The **Description:**

area is identified with concrete AC-540 markers and are posted with Underground Radioactive

Material signs. The surface has been planted with wheat grass.

Waste Type: Process Effluent

The site received the first-cycle supernatant waste from the 221-T Building via the 241-T-104, Waste

241-T-105 and 241-T-106 Tanks in the 241-T Tank Farm. The waste is high in salt and is **Description:**

neutral to basic.

Site Code: 216-T-15 **Classification:** Accepted

216-T-15, 241-T-2 Trench, 241-T-2 Grave, **Site Names: ReClassification:**

216-T-14, 216-T-15 Crib

Site Type: Trench **Start Date:** 1954 **Site Status:** Inactive **End Date:** 1954

The 216-T-14, 216-T-15, 216-T-16 and 216-T-17 trenches were surface stabilized as a unit. The Site

area is identified with concrete AC-540 markers and are posted with Underground Radioactive **Description:**

Material signs. The surface has been planted with wheat grass.

Process Effluent Waste Tyne

masic Type. i ioccss Linuciii

The site received the first-cycle supernatant waste from the 221-T Building via the 241-T-104, Waste **Description:**

241-T-105 and 241-T-106 Tanks in the 241-T Tank Farm. The waste is high in salt and is

neutral to basic.

Site Code: 216-T-16 **Classification:** Accepted

Site Names: 216-T-16, 241-T-3 Trench, 241-T-3 Grave, **ReClassification:**

216-T-15, 216-T-16 Crib

Site Type: Trench **Start Date:** 1954 **Site Status:** Inactive **End Date:** 1954

Site The 216-T-14, 216-T-15, 216-T-16 and 216-T-17 trenches were surface stabilized as a unit. The

Description: area is identified with concrete AC-540 markers and are posted with Underground Radioactive

Material signs. The surface has been planted with wheat grass.

Process Effluent Waste Type:

The site received the first-cycle supernatant waste from the 221-T Building via the 241-T-104, Waste

241-T-105 and 241-T-106 Tanks in the 241-T Tank Farm. The waste is high in salt and is **Description:**

neutral to basic.

216-T-17 **Site Code: Classification:** Accepted

216-T-17, 241-T-4 Trench, 216-T-4 Grave, **Site Names: ReClassification:**

216-T-16

Site Type: Start Date: 1954 Trench **Site Status:** Inactive **End Date:** 1954

The 216-T-14, 216-T-15, 216-T-16 and 216-T-17 trenches were surface stabilized as a unit. The Site

area is identified with concrete AC-540 markers and are posted with Underground Radioactive **Description:**

Material signs. The surface has been planted with wheat grass.

Waste Type: Process Effluent

Waste The site received the first-cycle supernatant waste from the 221-T Building via the 241-T-104, **Description:**

241-T-105 and 241-T-106 Tanks in the 241-T Tank Farm. The waste is high in salt and is

neutral to basic

Classification: **Site Code:** 216-T-21 Accepted

Site Names: 216-T-21, 241-TX-1 Trench, 216-TX-1 **ReClassification:**

Grave, 216-TX-3

Start Date: 1954 **Site Type:** Trench **Site Status:** Inactive **End Date:** 1954

This site consists of a backfilled trench. It is one of five specific retention trenches (216-T-21, Site

216-T-22, 216-T-23, 216-T-24 and 216-T-25) that was surface stabilized as one unit. The group **Description:**

of trenches is surrounded with concrete AC-540 markers and Underground Radioactive Material

signs.

Waste Type: Process Effluent

Waste The trench received first cycle supernate from 221-T that was high in salt, neutral to basic, and contained fluoride, nitrate, phosphate, sodium, sodium aluminate, sodium hydroxide,

sodium silicate, and sulfate.

Site Code: 216-T-22 Classification: Accepted

Site Names: 216-T-22, 241-TX-2 Trench, 216-TX-2 ReClassification:

Grave, 216-TX-4

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site This site consists of a backfilled trench. It is one of five specific retention trenches (216-T-21,

Description: 216-T-22, 216-T-23, 216-T-24 and 216-T-25) that was surface stabilized as one unit. The group of trenches is surrounded with concrete AC-540 markers and Underground Radioactive Material

signs.

Waste Type: Process Effluent

Waste The trench received first cycle supernate from 221-T that was high in salt, neutral to basic, and contained fluoride, nitrate, phosphate, sodium, sodium aluminate, sodium hydroxide,

sodium silicate, and sulfate.

Site Code: 216-T-23 Classification: Accepted

Site Names: 216-T-23, 241-TX-3 Trench, 216-TX-3 ReClassification:

Grave, 216-TX-5, 241-TX-3 Grave

Site Type:TrenchStart Date:1954Site Status:InactiveEnd Date:1954

Site This site consists of a backfilled trench. It is one of five specific retention trenches (216-T-21,

Description: 216-T-22, 216-T-23, 216-T-24 and 216-T-25) that was surface stabilized as one unit. The group of trenches is surrounded with concrete AC-540 markers and Underground Radioactive Material

signs.

Waste Type: Process Effluent

Waste The trench received first cycle supernate from 221-T that was high in salt, neutral to basic, and

Description: contained fluoride, nitrate, nitrite, phosphate, sodium, sodium aluminate, sodium hydroxide,

sodium silicate, and sulfate.

Site Code: 216-T-24 Classification: Accepted

Site Names: 216-T-24, 241-TX-4 Trench, 216-TX-4 ReClassification:

Grave, 216-TX-6

Site Type: Trench Start Date: 1954
Site Status: Inactive End Date: 1954

Site This site consists of a backfilled trench. It is one of five specific retention trenches (216-T-21, **Description:** 216-T-22, 216-T-23, 216-T-24 and 216-T-25) that was surface stabilized as one unit. The group

of trenches is surrounded with concrete AC-540 markers and Underground Radioactive Material signs.

Waste Type: Process Effluent

Waste The trench received first cycle supernate that was high in salt, neutral to basic, and contained **Description:**

fluoride, nitrate, nitrite, phosphate, sodium, sodium aluminate, sodium hydroxide, sodium silicate, and sulfate.

Site Code: 216-T-25 **Classification:** Accepted

216-T-25, 241-TX-5 Trench, 216-TX-5 **Site Names: ReClassification:**

Grave, 216-TX-7

Start Date: 1954 **Site Type:** Trench **Site Status:** Inactive **End Date:** 1954

This site consists of a backfilled trench. It is one of five specific retention trenches (216-T-21, Site

216-T-22, 216-T-23, 216-T-24 and 216-T-25) that was surface stabilized as one unit. The group **Description:**

of trenches is surrounded with concrete AC-540 markers and Underground Radioactive Material

signs.

Waste Type: Process Effluent

The trench received evaporator bottom waste consisting of sludge from condensing first cycle Waste **Description:**

waste in the 242-T Evaporator. It was high in salt, neutral to basic, and contained fluoride,

nitrate, nitrite, phosphate, sodium, sodium aluminate, sodium hydroxide, sodium silicate, and sulfate.

Site Code: 216-T-32 **Classification:** Accepted

216-T-32, 241-T #1 & 2 Cribs, 216-T-6 **Site Names: ReClassification:**

Crib 1946 **Site Type: Start Date: Site Status:** Inactive **End Date:** 1952

Site The crib is located inside the 241-T Tank Farm fence. The fence is posted with Radiological

Description: Buffer Area/Underground Radioactive Material signs. The tank farm has a gravel surface. The

crib is not separately identified.

Waste Type: Process Effluent

The site received waste from 224-T via the 241-T-201 Tank. The waste was high in salt, neutral Waste

Description: to basic, and contained nitrate, sodium, ammonium nitrate, sodium oxalate, fluoride, sulfate, and

phosphate.

Site Code: 241-T-361 **Classification:** Accepted

Site Names: 241-T-361, 241-T-361 Settling Tank, 361-**ReClassification:**

T-TANK, IMUST, Inactive Miscellaneous

Underground Storage Tank

Site Type: Settling Tank **Start Date:** 1944 Site Status: Inactive End Date: 1951

Site The 241-T-361 Tank is enclosed with light post and chain and concrete AC-540 markers. The

Description: underground tank is posted with Inactive Miscellaneous Underground Storage Tank and

Underground Radioactive Material signs

Waste Type: Storage Tank

Waste The tank received waste from 221-T and 224-T. Sludge samples taken in 1976 contained 23 micrograms of plutonium, 12 microcuries per gram of strontium-90 and 67.6 microcuries per

micrograms of plutonium, 12 microcuries per gram of strontium-90 and 67.6 microcuries per gram of cesium-137. The liquid supernate contained 3.71 microcuries per gallon of cesium-137

and 14.5 milligrams per gallon of plutonium.

Site Code: 200-W-48 Classification: Accepted

Site Names: 200-W-48, 241-TX 90-Day Waste ReClassification: Rejected (9/6/2000)

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1993

Site The 241-TX Tank Farm 90-Day Waste Accumulation Area has been inactive since October 1993.

Description: per the 90-day inspection records maintained by Environmental Waste Operations at the 209-E

Building. The site was a self-contained conex box with a spill berm.

Site Code: 200-W-52 Classification: Accepted

Site Names: 200-W-52, 216-T-7 Crib, 241-T-3 Crib ReClassification:

Site Type:CribStart Date:1948Site Status:InactiveEnd Date:1955

Site The crib is located inside the 241-T Tank Farm fence. The fence is posted with Radiological

Description: Buffer Area/Underground Radioactive Material signs. The tank farm has a gravel surface. The

crib is not separately identified.

Waste Type: Process Effluent

Waste Description:

Site Code: UPR-200-E-7 Classification: Accepted

Site Names: UPR-200-E-7, UN-200-E-7, Cave-In Near **ReClassification:**

219-B-9 (241-B-361 Crib)

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site The site is an unplanned release to the soil from a waste line break. The Unplanned Release site

Description: is not separately marked or posted. The 216-B-9 crib is marked with AC-540 markers.

Waste Type: Process Effluent

Waste Description:

The release consisted of 18,925 liters (5000 gallons) of B Plant cell wash water from the 5-9 tank. The maximum dose rate was 1.7 rads/hour. Approximately, 2.8 square meters (30 square feet) of soil was contaminated by this release.

200-UP-2

Site Code: 221-U Classification: Accepted

Site Names: 221-U, 221-U Canyon Building, 221-U ReClassification:

Building, U Plant

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1958

Site The 221-U Process Canyon is a large, reinforced concrete building. It consists of twenty sections **Description:** (two cells per section) with expansion joints between each section. The building is divided

lengthwise into the gallery side and the canyon chemical processing side by a thick, concrete shielding wall running the full length of the building. The building contains processing equipment and tanks that supported the uranium recovery process. The canyon deck currently is used to store radioactively contaminated surplus/spare equipment. The 221-U facility is accessed through the

271-U annex, which is attached to the west side of the 221-U building.

Waste Type: Process Effluent

Waste Processing areas and equipment are contaminated with uranium and fission products. Residual

Description: chemicals remain from the uranium recovery and equipment decontamination activities.

SubSites:

SubSite Code: 221-U:1

SubSite Name: 221-U:1, 211-U Tank Farm, Chemical Storage Tanks

Classification: Accepted

ReClassification:

Description: The 211-U Tank Farm was a bulk liquid storage area, consisting of nine aboveground storage

tanks. The tanks are located on the west side of the 221-U building. Six tanks are horizontal tanks, 2.7 meter diameter, 11 meters long (9 foot diameter, 36 feet long). Three of the horizontal tanks were sodium hydroxide storage tanks, one was a demineralized water storage tank and two were considered spare tanks. Three tanks are vertical tanks, 3 meter diameter, 4.2 meters high (10 foot diameter, 14 feet high). One was a demineralized water storage tank and two were chemical make-up tanks. The bulk liquid was transferred to the 211-U tanks

from rail cars or trucks.

In 2002, only four horizontal tanks and one vertical tank remained. The area had been posted with Radiological Buffer Area/Radioactive Material Area signs. The area around the tanks was covered with clean gravel and reposted with Underground Radioactive Material signs.

SubSite Code: 221-U:2

SubSite Name: 221-U:2, 211-UA, 211-AU Tank Farm, Chemical Storage Tanks

Classification: Accepted

ReClassification:

Description: The 211-UA (alias 211-AU) Tank Farm consists of sixteen aboveground storage tanks.

Thirteen tanks have a capacity of 380,000 liters (100,000 gallons) each. The tanks are located on the west side of the 221-U building. Nine of these tanks were nitric acid storage tanks and four were sodium hydroxide storage tanks. Three smaller tanks 2.7 meters in

diameter and 2.7 meters tall (9 feet diameter, 9 feet tall) were nitric acid sample tanks. The bulk liquid was transported to the tanks in railcars or trucks.

The Uranium Recovery Process at 224-U received uranyl nitrate from REDOX and PUREX. After the uranium was removed, the "reclaimed" nitric acid was stored in the 211-UA tanks. It was transferred from 224-U to 211-UA via overhead lines. The slightly radioactive nitric acid was recycled back to REDOX and PUREX. In the 1960's and 1970's it was returned to the separations facilities in railcars. It was pumped out of the 211-UA tanks into the railcars via underground lined and a pump pit. Some leakage was associated with the pumping process and caused low level radioactive contamination around the area.

The reclaimed nitric acid storage was moved from 211-UA to a holding tank within the 224-U facility in the 1980's and the railcar unloading platform was abandoned. Some residual acid and waste water, contaminated above crib release limits, continued to be stored in the 211-UA tanks. All the acid and waste water was removed from the tanks prior to being transitioned to the new Environmental Restoration Contractor in 1994. Although the tanks were emptied, the acid pump pit and underground lines had not been flushed. Leaking valves and seals and residual contamination in the pump pit caused low level radioactive contamination to spread around the tanks and railcar unloading platform. The area was posted as a Contamination Area again in the early 1990's. The lines and pump pit were flushed in 1998 and the surface contamination was covered with gravel. The area was changed to an Underground Radioactive Material Area.

In 2002, only ten tanks remained. They had been posted with Contamination Area signs. The area surrounding the tanks was covered with clean gravel and reposted with Underground Radioactive Material signs.

SubSite Code: 221-U:3

SubSite Name: 221-U:3, 276-U Tank Farm, Solvent Storage Tanks

Classification: Accepted

ReClassification:

Description:

The 276-U Solvent storage area consists of six tanks mounted inside a cement basin, located on the south end of the 221-U building. Tank leakage was collected in a sump that could be returned to the tanks, sent to a drum out facility of discharged to cribs. The 276-U tanks are connected to the 221-U building by the "hot" pipe trench in the 221-U pipe gallery. Organic make-up solutions of tributyl phosphate and dilutent were stored and treated and routed to the 221-U vessels via the pipe gallery. The dilutent storage tank has a (29,000 gallon) capacity. The tributyl phosphate storage tank has a (6,000 gallon) capacity. The organic receiver storage tank has a (10,000 gallon) capacity. The organic treatment storage tank has a (10,000 gallon) capacity. The organic treatment storage tank has a (13,000 gallon) capacity. The RAX feed storage tank has a (10,000 gallon) capacity.

Site Code: 224-U CNT Classification: Accepted

Site Names: 224-U CNT, 224-U Condensate ReClassification:

Neutralization Tank, 224-U Process Condensate Neutralization Tank, Process Condensate Elementary Neutralization Unit, Tank TK-C-5, 224-U-TK-C-5

Site Type:Neutralization TankStart Date:1987Site Status:InactiveEnd Date:1989

Site The unit is part of a four tank system designed to neutralize UO3 Plant process condensate prior

Description: to disposal in the 216-U-17 Crib.

Waste Type: Process Effluent

Waste Under normal operating conditions, the process condensate is not designated as a dangerous

Description: waste. However, there is a potential for residual chemical or radiological contamination to be

present in this neutralization system.

Site Code: 224-U HWSA Classification: Accepted

Site Names: 224-U HWSA, 224-U Hazardous Waste ReClassification: Rejected (9/6/2000)

Storage Area

Site Type:Storage Pad (<90 day)</th>Start Date:1986Site Status:InactiveEnd Date:1995

Site The unit consisted of a paved pad surrounded by a paved parking area on the northwest side of the

Description: 224-U Building. There is (April 12, 2000) no longer any evidence of the 90 Day Storage Pad in

the area.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Waste that was stored (staged) here included paints, solvents, and other hazardous wastes

Description: generated at the Uranium Trioxide (UO3) Plant.

Site Code: 271-U Classification: Accepted

Site Names: 271-U, 271-U Office Building, 271-U **ReClassification:**

Building

Site Type: Office Start Date: 1952

Site Status: Active End Date:

Site The 271-U Office Building is an office/service building constructed of a reinforced concrete

Description: foundation, floors, and pillars with pumice block walls. The four story structure (including the

basement) is physically attached to the gallery side of the 221-U Canyon.

Waste Type: Chemicals

Waste Residual chemicals and radionuclides may be present in some portions of this building. The

Description: contamination may be related to vermin intrusion or from processes that were conducted in this

unit.

Site Code: 276-U Classification: Accepted

Site Names: 276-U, 276-U Solvent Handling Facility, **ReClassification:**

276-U Solvent Facility, 276-U Solvent

Recovery Facility

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1957

Site The 276-U Solvent Recovery Facility is an aboveground concrete basin extending below grade.

Description: The unit is physically attached to the southern wall of the 221-U Canyon.

Waste Type: Chemicals

Waste Radiological contamination (fixed and smearable) is present on the structures and equipment.

Description: Residual chemical contamination may also be present.

Site Code: 291-U Classification: Accepted

Site Names: 291-U, 291-U Fan Control House ReClassification:

Site Type: Process Unit/Plant Start Date: 1945

Site Status: Active End Date:

Site The building is constructed of reinforced concrete foundation and floor, concrete and block walls, and a concrete slab roof covered with asphalt and gravel, trimmed in wood. It is a one-story, one-

room building with wooden doors containing the ventilation system instrumentation. Two electric fans are located outside, adjacent to the building. The fan control house is located within a larger, posted Underground Radioactive Material area, although the 291-U building and exhaust fans

remain posted as Contamination Areas.

Waste Type: Equipment

Waste The instrument house has likely become contaminated from exhaust from 221-U.

Description:

Site Code: 291-U-1 Classification: Accepted

Site Names: 291-U-1, 291-U-1 Stack, 291-U Stack ReClassification:

Site Type: Stack Start Date: 1945

Site Status: Active End Date:

Site The unit consists of a reinforced concrete stack, lined with acid-resistant brick resting on an

Description: octagonal, two-tiered foundation of brick and concrete. The stack is 61 meters (200 feet) high and 4.3 meters (14 feet) in diameter at the base. The stack is located within a larger Underground

Radioactive Material area, although the 291-U building and exhaust fans remain posted as

Contamination Areas.

Waste Type: Chemicals

Waste The air exhaust system was contaminated with radioactive particulates.

Description:

Site Code: 296-U-10 Classification: Accepted

Site Names: 296-U-10, 296-U-10 Stack ReClassification:

Site Type: Stack Start Date:

Site Status: Inactive End Date: 1976

Site This exhaust stack is constructed of carbon steel. It is on the rooftop of the 271-U Building and is

Description: supported by the 221-U Building wall. The stack is 0.6 meters (24 inches) in diameter and

extends 3 meters (10 feet) above the roof. An electric motor and fan enclosure, associated with

the stack, are also mounted on the rooftop, and rest on a 3 meter by 2.4 meter (9 foot 10 inch by 8 foot) metal foundation.

Waste Type: Process Effluent

Waste The unit consists of carbon steel with trace amounts of surface contamination.

Description:

Site Code: 200-W-44 Classification: Accepted

Site Names: 200-W-44, 291-U Stack Sand Filter ReClassification:

Site Type: Sand Filter Start Date: 1948

Site Status: Active End Date:

Site The sand filter is constructed of reinforced concrete that is partially below grade with an asphalt covered, concrete slab roof. The chain link fence was removed in March 2002, when the area wa

covered, concrete slab roof. The chain link fence was removed in March 2002, when the area was surface stabilized. It is posted as an Underground Radioactive Material area. The sides of the

sand filter that extend above grade are covered with gravel.

Waste Type: Soil

Waste The sand filter contains low-level fission products, but no plutonium.

Description:

Site Code: 200-W-104 Classification: Discovery

Site Names: 200-W-104, 2714-U Building, UO3 ReClassification:

Storage Warehouse

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site The site is a metal building surrounded by a chain link fence. The building is posted with

Description: Contamination Area, Radioactive Material Area signs.

Waste Type: Equipment

Waste The building had been used to store contaminated equipment related to the UO3 operation.

Description: Most of the material has been removed. Two water shield doors (water drained) are being stored

for the Plutonium Finishing Plant facility. Some miscellaneous metal piping also remains inside

the building.

Site Code: 2727-WA Classification: Accepted

Site Names: 2727-WA, 2727-WA SRE Sodium Storage ReClassification: Closed Out (2/22/1999)

Building

Site Type:StorageStart Date:1977Site Status:InactiveEnd Date:1999

Site The 2727-WA building was constructed to store sodium from the Sodium Reactor Experiment

Description: (SRE) reactor. The unit is a prefabricated Butler-type metal building with a concrete floor. All of

the SRE sodium storage containers have been removed. The building's maximum process design

capacity for container storage was 132,000 liters (35,000 gallons). When used for sodium

storage, the containers were stored on noncombustible pallets and occupied approximately one quarter of the floor space in the building.

Waste Type: Chemicals

Waste The sodium had been used as primary coolant in an experimental reactor and was slightly contaminated. A regulatory analysis of the sodium concluded that it was not a dangerous or **Description:**

mixed waste. The sodium was held in 158, 208-liter (55-gallon) steel containers.

200-UP-3

Site Code: 241-U-A Classification: Accepted

Site Names: 241-U-A, 241-U-A Diversion Box, 241-U- ReClassification:

A Valve Pit

Site Type: Valve Pit Start Date: 1973

Site Status: Active End Date:

Site This unit is a rectangular reinforced concrete structure. The valve pit is below grade with the cover block above grade. Valve handles extend above the cover block through penetrations.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-U-B Classification: Accepted

Site Names: 241-U-B, 241-U-B Diversion Box, 241-U- ReClassification:

B Valve Pit

Site Type: Valve Pit Start Date: 1973

Site Status: Active End Date:

Site This unit is a rectangular reinforced concrete structure. The valve pit is below grade with the cover block above grade. Valve handles extend above the cover block through penetrations.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-U-C Classification: Accepted

Site Names: 241-U-C, 241-U-C Diversion Box, 241-U- ReClassification:

C Valve Pit

Site Type: Valve Pit Start Date: 1973

Site Status: Active End Date:

Site This unit is a rectangular reinforced concrete structure. The valve pit is below grade with the cover block above grade. Valve handles extend above the cover block through penetrations.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-U-D Classification: Accepted

Site Names: 241-U-D, 241-U-D Diversion Box, 241-U- ReClassification:

D Valve Pit

Site Type: Valve Pit Start Date: 1973

Site Status: Active End Date:

Site This unit is a rectangular reinforced concrete structure. The valve pit is below grade with the cover block above grade. Valve handles extend above the cover block through penetrations.

Waste Type: Process Effluent

Waste The unit transports waste solutions from processing and decontamination operations. Quantities

Description: are variable according to specific plant operations. It is estimated that approximately 23

kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Site Code: 241-U-101 Classification: Accepted

Site Names: 241-U-101, 241-U-TK-101 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1959

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-101 is the first

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-101 included metal waste from T-Plant. Waste was received **Description:** from various storage tanks for processing in the 242-T Evaporator. Tank 241-U-101 received a

variety of solid waste items. These included experimental fuel elements, shroud tubes, and samarium balls. The total fissile material contents of the waste was 54.01 ounces (1,530 grams)

of 4.5 percent enriched uranium and 0.21 ounces (6 grams) of plutonium.

Site Code: 241-U-102 Classification: Accepted

Site Names: 241-U-102, 241-U-TK-102 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1976

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-102 is the

Description: second tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-

roofed with a single steel liner lying across the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-102 included metal waste from T-Plant. Waste was also

Description: received from various storage tanks for processing in the 242-T Evaporator.

Site Code: 241-U-103 Classification: Accepted

Site Names: 241-U-103, 241-U-TK-103 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1978

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-103 is the third

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed

with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-103 included metal waste from T-Plant and waste from various

Description: storage tanks for processing in the 242-T Evaporator.

Site Code: 241-U-104 Classification: Accepted

Site Names: 241-U-104, 241-U-TK-104 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1961

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-104 is the first

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed

with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste transferred to Tank 241-U-104 included bismuth phosphate metal waste. Diatomaceous

Description: earth was added in 1969.

Site Code: 241-U-105 Classification: Accepted

Site Names: 241-U-105, 241-U-TK-105 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1978

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-105 is the

Description: second tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-

roofed with a single steel liner lying across the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-105 included bismuth phosphate metal waste, REDOX waste,

Description: coating waste, decontamination waste, and evaporator feed and bottoms waste.

Site Code: 241-U-106 Classification: Accepted

Site Names: 241-U-106, 241-U-TK-106 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1977

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-106 is the third

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-106 included bismuth phosphate metal waste, REDOX waste,

Description: coating waste, decontamination waste, and evaporator feed and bottoms waste.

Site Code: 241-U-107 Classification: Accepted

Site Names: 241-U-107, 241-U-TK-107 ReClassification:

Site Type:Single-Shell TankStart Date:1948Site Status:InactiveEnd Date:1980

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-107 is the first

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed

with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-107 included bismuth phosphate metal waste, REDOX waste,

Description: coating waste, decontamination waste, and evaporator feed and bottoms waste.

Site Code: 241-U-108 Classification: Accepted

Site Names: 241-U-108, 241-U-TK-108 ReClassification:

Site Type: Single-Shell Tank Start Date: 1949

Site Status: Inactive End Date: 1979

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-108 is the

Description: second tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-

roofed with a single steel liner lying across the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-108 included bismuth phosphate metal waste, REDOX waste,

Description: coating waste, decontamination waste, and evaporator feed and bottoms waste.

Site Code: 241-U-109 Classification: Accepted

Site Names: 241-U-109, 241-U-TK-109 ReClassification:

Site Type:Single-Shell TankStart Date:1949Site Status:InactiveEnd Date:1980

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-109 is the third tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed

with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to this unit included bismuth phosphate metal waste, REDOX waste, coating

Description: waste, decontamination waste, and evaporator feed and bottoms waste.

Site Code: 241-U-110 Classification: Accepted

Site Names: 241-U-110, 241-U-TK-110 ReClassification:

Site Type:Single-Shell TankStart Date:1946Site Status:InactiveEnd Date:1975

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-110 is the first

Description: tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-roofed

with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste This unit received first-cycle decontamination waste, REDOX waste, and evaporator feed.

Description:

Site Code: 241-U-111 Classification: Accepted

Site Names: 241-U-111, 241-U-TK-111 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1980

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-111 is the **Description:** second tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, dome-

roofed with a single steel liner lying across the tank wall. The tank is buried underground to

provide radiation shielding.

Waste Type: Storage Tank

Waste Tank 241-U-111 received first-cycle decontamination waste, REDOX waste, and 242-T

Description: Evaporator waste.

Site Code: 241-U-112 Classification: Accepted

Site Names: 241-U-112, 241-U-TK-112 ReClassification:

Site Type:Single-Shell TankStart Date:1947Site Status:InactiveEnd Date:1975

Site This unit is a first-generation, underground single-shell storage tank. Tank 241-U-112 is the third tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed

tank of a three-tank cascade series. This tank is concrete-reinforced, cylindrical, and dome-roofed with a single steel liner lying across the tank wall. The tank is buried underground to provide

radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-112 included bismuth phosphate first-cycle waste and REDOX

Description: high-level waste from the 241-U Tank Farm.

Site Code: 241-U-153 Classification: Accepted

Site Names: 241-U-153, 241-U-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1981

Site The tank farm is surrounded with a locked chain link fence. The tank farm has been covered with

Description: a layer of gravel. The 241-U-153 Diversion Box structure is mostly below ground. It is a

reinforced concrete structure with 3 inch (8 centimeter) Hanford style nozzles.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations. Lead shielding may

also be contained inside the diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste Waste lead is stored in the diversion box.

Description:

Site Code: 241-U-201 Classification: Accepted

Site Names: 241-U-201, 241-U-TK-201 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1977

Site This tank is made of reinforced-concrete and is lined with a steel cylinder. The structure has a

Description: concrete base slab and is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-201 included supernatant containing REDOX high-level waste

Description: from the 241-U Tank Farm.

Site Code: 241-U-202 Classification: Accepted

Site Names: 241-U-202, 241-U-TK-202 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1978

Site This tank is made of reinforced-concrete and is lined with a steel cylinder. The structure has a

Description: concrete base slab and is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-202 included supernatant containing REDOX high-level waste

Description: from the 241-U Tank Farm.

Site Code: 241-U-203 Classification: Accepted

Site Names: 241-U-203, 241-U-TK-203 ReClassification:

Site Type:Single-Shell TankStart Date:1956Site Status:InactiveEnd Date:1977

Site This tank is made of reinforced-concrete and is lined with a steel cylinder. The structure has a

Description: concrete base slab and is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-203 included supernatant containing REDOX high-level waste

Description: from the 241-U Tank Farm.

Site Code: 241-U-204 Classification: Accepted

Site Names: 241-U-204, 241-U-TK-204 ReClassification:

Site Type:Single-Shell TankStart Date:1954Site Status:InactiveEnd Date:1978

Site This tank is made of reinforced-concrete and is lined with a steel cylinder. The structure has a

Description: concrete base slab and is buried underground to provide radiation shielding.

Waste Type: Storage Tank

Waste Waste transferred to Tank 241-U-204 included supernatant containing REDOX high-level waste

Description: from the 241-U Tank Farm.

Site Code: 241-U-252 Classification: Accepted

Site Names: 241-U-252, 241-U-252 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1983

Site The 241-U-252 Diversion Box is a reinforced concrete structure with 3 inch (8 centimeter)

Description: Hanford style nozzles.

Waste Type: Process Effluent

vaste type. 1100000 Linuoni

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: Operations. Volumes were variable according to specific plant operations. It is estimated that

approximately 23 kilograms (50 pounds) of lead shielding may be stored in each diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste Waste lead is stored in the diversion box.

Description:

Site Code: 241-U-301 Classification: Accepted

Site Names: 241-U-301, 241-U-301B ReClassification:

Site Type: Catch Tank Start Date: 1946

Site Status: Active End Date:

Site The 241-U-301 structure consists of a catch tank and a pump pit directly above the catch tank.

Description: The catch tank is an unlined, reinforced concrete tank buried below grade to provide radiation

shielding.

Waste Type: Storage Tank

Waste This unit was used as containment for waste solutions that were transferred from processing and

Description: decontamination operations.

Site Code: 244-U DCRT Classification: Accepted

Site Names: 244-U DCRT, 244-U Double-Contained ReClassification:

Receiver Tank, 244-U RT, 244-U Receiver Tank, 244-U Receiving Vault, 244-U-

TK/SMP

Site Type: Receiver Tank Start Date: 1987

Site Status: Active End Date:

Site This site consists a reinforced concrete structure with a steel-lined vault. Inside the vault (lower

Description: part of structure) is a 21,000-gallon (79,500 liter) carbon steel tank set horizontally. The structure

also contains a pump pit and sump. Approximately 1 foot (0.31 meter) of the structure extends

above ground.

Waste Type: Water

Waste This site does not contain waste although the site is designed to receive saltwell waste. The unit

Description: tank contains water from operational test procedures being conducted.

Site Code: 241-UR-151 Classification: Accepted

Site Names: 241-UR-151, 241-UR-151 Diversion Box **ReClassification:**

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site The diversion box has been covered with shotcrete. This unit is constructed of reinforced concrete

Description: and is rectangular in shape.

Waste Type: Process Effluent

Waste This unit was used for transfer of waste solutions from processing and decontamination. It is **Description:** estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in each

diversion box. It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may

be stored in each diversion box.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste Waste lead is stored in the diversion box.

Description:

Site Code: 241-UR-152 Classification: Accepted

Site Names: 241-UR-152, 241-UR-152 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1949Site Status:InactiveEnd Date:1980

Site This unit is an underground reinforced concrete structure. All nozzles are 4 inch (10 centimeters)

Description: REDOX style.

Waste Type: Chemicals

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Waste Type: Equipment

Waste Waste lead is stored in the diversion box.

Description:

Site Code: 241-UR-153 Classification: Accepted

Site Names: 241-UR-153, 241-UR-153 Diversion Box ReClassification:

Site Type:Diversion BoxStart Date:1946Site Status:InactiveEnd Date:1983

Site This unit is a reinforced concrete structure.

Description:

Waste Type: Process Effluent

This unit was used for transfer of waste solutions from processing and decontamination Waste

operations. Volumes were variable according to specific plant operation. **Description:**

Waste Type: Equipment

Equipment associated with the diversion box includes transfer piping and nozzles. Waste

Description:

Waste Type: Equipment

Waste It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in

Description: each diversion box.

Site Code: 241-UR-154 **Classification:** Accepted

ReClassification: Site Names: 241-UR-154, 241-UR-154 Diversion Box

Start Date: 1949 Diversion Box Site Type: **Site Status:** Inactive End Date: 1980

Site This unit is a reinforced concrete structure.

Description:

Process Effluent **Waste Type:**

Waste This unit was used for transfer of waste solutions from processing and decontamination

Description: operations. Volumes were variable according to specific plant operations.

Waste Type: Equipment

Waste Equipment associated with the diversion box includes transfer piping and nozzles.

Description:

Site

Equipment **Waste Type:**

It is estimated that approximately 23 kilograms (50 pounds) of lead shielding may be stored in Waste

Description: each diversion box.

Site Code: 244-UR VAULT Classification: Accepted

Site Names: 244-UR VAULT, 244-UR Vault, (Tanks -**ReClassification:**

> 001 through -004), IMUST, Inactive Miscellaneous Underground Storage Tank

Receiving Vault **Start Date:** 1952 **Site Type:**

1975 **Site Status:** Inactive **End Date:**

The 241-U Tank Farm is posted as a "Contamination Area." The vault was covered with pumped concrete in 1992. The vault is surrounded with post and chain and marked with IMUST signs. **Description:**

> The 244-UR Vault is an underground concrete structure divided vertically into four sections (process vaults). Each section houses a tank and a sump. The sections are divided horizontally to provide pump pits above the tanks. The pump pits contain pumps and piping that were used during liquid transfers. The walls, floors, horizontal divisions, and roofs (ground level) are

constructed of reinforced concrete. The sumps are located in the sections occupied by Tanks 244-UR-001, 244-UR-002, 244-UR-003 and 244-UR-004. Tank 244-UR-001 is a slurry accumulator tank. Tanks 244-UR-002 and 244-UR-003 are identical blend tanks. Tank 244-UR-004 is a process tank. There are also above ground service facilities that include four instrument shelters, an inlet filter enclosure, and six risers used to measure liquid levels in tanks and sumps.

Conditioned inlet air to the vault was supplied through an above grade supply system located just north of the vault. Exhaust air from the vault was passed through an underground filter chamber, then to an above grade exhaust fan and discharge stack.

The 244-UR Vault was used until 1956 and was taken out of regular service in 1957. Apparently, the vault tanks were not used after this time and the entire vault was interim stabilized in 1985.

Presumably, some wastes (sludges and liquids) were left in the tanks of the 244-UR Vault at the close of active vault use in the 1950's as records from the 1970's and early 1980's report varying amounts of wastes in the tanks and tank pits/sumps. Intrusion of water (precipitation) from the ground surface above the vault contributed to the varying amounts of liquid found in the tank pits during this period. SD-WM-TI-356 lists liquid level readings (and the reasons for increases and decreases in the liquid level readings) in the tanks and sumps over the period from 1974 through 1985.

The records associated with the tank isolation project (B-231) of the mid 1980's provide the most reliable current estimates of tank and tank pit waste volumes. These estimates are provided for each of the tanks (see subsites section).

Project B-231 isolated the 244-UR Vault as a single system. Four above grade instrument and electrical enclosures were removed. The underground conduit trenches existing between each enclosure and the companion vault compartment were sealed by casting a concrete slab over the enclosure footing. Grade level raw water nozzles that connected to the vault internal piping were cut and capped. Grade level steam distribution piping and control valving were removed. Process steam lines that connected to the vault internal piping were cut and capped. Encased process pipelines interconnect the 244-UR Vault with the 241-UR-151 Diversion Box. Closure of these lines was not required as both diversion boxes were already isolated. Process air lines were cut and blind flanges were installed onto both sides of each branch line isolated. The evaporative cooling unit was abandoned in place and the ducting cut, then sealed with a concrete plug. The above grade ventilation fans, above grade ducting, and discharge stack were previously removed. The fan inlet plenum was built into the fan base structure and was plugged by filling the plenum with sand and casting a fiberglass weather cover over the fan inlet ducts. The grade level vault cover blocks were sealed by a fiberglass weather cover.

WHC-EP-0560 states that liquid level readings for 1979 indicate the 244-UR-001 and 244-UR-003 had been pumped down to "minimum level", whereas 244-UR-002 was still listed as "active" ("Auxiliary Tanks, Sumps, and Vaults Solid and Liquid Volumes", J. E. Mirabella, 1978). Tank 244-UR-004 was also pumped to a minimum heal.

Waste Type: Process Effluent

Waste This unit received waste from 241-U Tank Farm. The volumes in Tanks 244-UR-001, 244-UR-Description: 002, 244-UR-003 and 244-UR-004 are unknown and not monitored. Tank volume estimates

are provided in WHC-SD-EN-ES-040, Rev. 0 (see subsites information).

Waste Type: Equipment

Waste The vault equipment, tanks, and concrete surfaces are contaminated.

Description:

Waste Type: Asbestos (non-friable)

Waste The vault contains a pipe that has asbestos insulation and is encased in concrete. This pipe is

Description: also radioactively contaminated.

SubSites:

SubSite Code: 244-UR VAULT:1

SubSite Name: 244-UR VAULT:1, 244-UR-001

Classification: Accepted

ReClassification:

Description:

The site is a vertical 0.635-centimeter (0.25-inch) carbon steel plate tank having a capacity of 189,250 liters (50,000 gallons). The tank dimensions are 6.1 meters by 6.1 meters (20 feet by 20 feet). The tank contains 7,010 liters (1,872 gallons) of sludge and 1476.2 liters (390 gallons) of supernatant. The tank was constructed in 1951 and was in operation from 1952 to 1956. The tank was taken out of service in 1957. Currently, the tank is stabilized and isolated.

Tank 244-UR-001 was used as a slurry accumulator tank (comparable to 244-BXR Vault Tank, 244-BX-001 and 244-TXR Vault Tank, 244-TX-001). As such, it was used as the collection point for waste slurries sluiced-mined from the U Tank Farm. The accumulated wastes were pumped from Tank 244-UR-001 to other tanks in the vault for further conditioning (see subsites 244-UR-002 and 244-UR-003).

Limited analytical data on the contents of Tank 244-UR-001 are available from a 1977 Atlantic Richfield Hanford Company (ARHCO) employee memorandum, "Isolation Criteria for 'Auxiliary' Tanks", C. M. Walker (Memorandum not in Waste Information Data System [WIDS] files). The values listed below have been taken from WHC-SD-EN-ES-040, Rev. 0.

- pH 7.5, radiation level 25 millirads/hour, specific gravity 1.0
- cesium-137 476 microcuries/liter (1,800 microcuries/gallon)
- uranium 0.528 milligrams/liter (2 milligrams/gallon)
- total beta 845 microcuries/liter (3,200 microcuries/gallon)
- total alpha 0.032 microcuries/liter (0.12 microcuries/gallon).

Limited information on the contents of the 244-UR-001 Sump were reported in the same memorandum listed above. The values listed below have been taken from WHC-SD-EN-ES-040, Rev. 0.

- pH 8.6, radiation level 30 millirads/hour
- cesium-137 673 microcuries/liter (1,700 microcuries/gallon)
- total beta 845 microcuries/liter (3,200 microcuries/gallon)
- total alpha 0.0145 microcuries/liter (0.055 microcuries/gallon)

WHC-SD-EN-ES-040, Rev.0 has listed the following safety issues:

- Hydrogen Buildup: Low risk since the total waste volume in the tank and sump is limited to about 18,925 liters (5,000 gallons).
- Ferrocyanide: No risk since little or no ferrocyanides are present and the tank contains mostly water.
- Organic Salts: Tributyl phosphate containing wastes were present in this tank, so some amount of organic salts is probably present. However, it is expected that this represents a low risk as the wastes are dilute.

- Flammability: Low risk as little or no flammable material and no ignition sources are present.
- Vapor Emission: Low risk because present waste content is not expected to contain significant amounts of volatile material.
- Tank Integrity: No evidence of leaks emerged in the 1970's. Present waste content is not strongly corrosive, yet design life of the tank has been exceeded. Consequently, there is low to moderate risk of tank leakage.
- Criticality Safety: Low risk (traces of plutonium only).
- Radiological Hazard: High risk because UPR-200-W-24 resulted in contamination of soils surrounding the vault. Background readings in the vault are the 1 to 50 millirem range.
- Heat Generation: Low risk (No Data).

SD-WM-TI-356 lists liquid level readings and cumulative change history for the tank and sump. The last reading for the tank, on July 15, 1985, was 20.3 centimeters (8.00 inches). The last reading in the sump, on June 27, 1985, was 55.9 centimeters (22.00 inches).

SubSite Code: 244-UR VAULT:2

SubSite Name: 244-UR VAULT:2, 244-UR-002

Classification: Accepted

ReClassification:

Description:

The site is a vertical type 347, stainless steel, 0.635-centimeter (0.25-inch) thick tank having a capacity of 56,775 liters (15,000 gallons). The tank is 3.66 meters by 4.27 meters (12 feet by 14 feet). The tank contains 8720.6 liters (2,304 gallons) of sludge and 810 or 2157.5 liters (214 or 570 gallons) (conflicting data) of supernatant. The tank was constructed in 1951 and was in operation from 1952 to 1976 (?). The tank is stabilized and isolated.

Tanks 244-UR-002 and 244-UR-003, essentially identical tanks, were used for blending, temperature adjustment, acidification, and venting of wastes received from 244-UR-001 (comparable to 244-BXR Vault Tank, 244-BX-002 and 244-TXR Vault Tank, 244-TX-002). Nitric acid used in this conditioning was received from Tank 244-UR-004.

A sample of liquid was obtained from cell 2 of the 244-UR Vault on November 5, 1974 (Sample # T-9505). (Source data not available in the Waste Information Data System [WIDS] files.) The results listed below have been taken from WHC-SD-EN-ES-040, Rev. 0 and WHC-EP-0560.

- visual appearance, yellow with no solids
- pH 9.1, radiation level 1 millirad/hour, specific gravity 1.01
- cesium-137 177 microcuries/liter (670 microcuries/gallon)
- aluminum < .0013 molar (< 35 milligrams/liter)
- sodium .0732 molar (1,690 milligrams/liter)
- nitrite .000645 molar (30 milligrams/liter)
- nitrate .0306 molar (1,900 milligrams/liter)
- plutonium < 1.40 micrograms/liter (<5.34 micrograms/gallon)
- phosphate < .00356 molar (340 milligrams/liter)
- iron .0000414 molar (<1 milligram/liter)
- carbonate .0325 molar (2,000 milligrams/liter)
- strontium-89,90 5.68 microcuries/liter (21.5 microcuries/gallon)
- water 99.95%

Although the memorandum indicates that the sample was from Tank 244-UR-002, it is suspected that the sample is actually from the pit or sump since the June 7, 1977 Atlantic Richfield Company (ARCHO) internal memorandum, "Isolation Criteria for 'Auxiliary'

Tanks", C. M. Walker, 1977, gives limited analytical results for Tank 244-UR-002 and sump contents as follows.

- total beta 845 microcuries/liter (3,200 microcuries/gallon)
- total alpha 0.032 microcuries/liter (0.12 microcuries/gallon).

Tank

- pH 0.7, radiation level 50 millirads/hour
- specific gravity 1.03
- cesium-137 0.87 microcuries/liter (3.3 microcuries/gallon)
- total beta 1321 microcuries/liter (5,000 microcuries/gallon)
- total alpha 0.37 microcuries/liter (1.4 microcuries/gallon)

Sump

- pH 9.0, radiation level 10 millirads/hour
- cesium-137 47.56 microcuries/liter (180 microcuries/gallon)
- total beta 66.05 microcuries/liter (250 microcuries/gallon)
- total alpha 0.1 microcuries/liter (0.38 microcuries/gallon)

WHC-SD-EN-ES-040, Rev.0 has listed the following safety issues.

- Hydrogen Buildup: Low risk since the total waste volume in the tank and sump is limited to about 11,355 liters (3,000 gallons) of dilute liquid waste. Any hydrogen generated should readily diffuse out of the tank and vault.
- Ferrocyanide: No risk since little or no ferrocyanides are present and the tank contains mostly water.
- Organic Salts: Tributyl phosphate containing wastes were present in this tank, so some amount of organic salts is probably present. However, it is expected that this represents a low risk as the wastes are dilute.
- Flammability: Low risk as little or no flammable material and no ignition sources are present.
- Vapor Emission: Low risk because present waste content is not expected to contain significant amounts of volatile material.
- Tank Integrity: No evidence of leaks emerged in the 1970's. Present waste content is not moderately corrosive, and the design life of the tank has been exceeded. Consequently, there is moderate to high risk of tank leakage.
- Criticality Safety: Low risk (traces of plutonium only).
- Radiological Hazard: High risk because UPR-200-W-24 resulted in contamination of soils surrounding the vault. Background readings in the vault are the 1 50 millirem range.
- Heat Generation: Low risk (No Data).

SD-WM-TI-356 lists liquid level readings and cumulative change history for the tank and sump. The last reading for the tank, on July 12, 1985, was 71.8 centimeters (28.25 inches). The last reading in the sump, on April 23, 1985, was 55.9 centimeters (15.25 inches).

SubSite Code: 244-UR VAULT:3

SubSite Name: 244-UR VAULT:3, 244-UR-003

Classification: Accepted

ReClassification:

Description: The site is a vertical type 347, stainless steel, 0.635-centimeter (0.25-inch) thick tank having a

capacity of 56,775 liters (15,000 gallons). The tank is 3.66 meters by 4.27 meters (12 feet by

14 feet). The tank contains 5934.9 liters (1,568 gallons) of sludge and 0 liters of supernatant. The tank was constructed in 1951 and was in operation from 1952 to 1976 (?). The tank is stabilized and isolated.

Tank 244-UR-002 and 244-UR-003, essentially identical tanks, were used for blending, temperature adjustment, acidification, and venting of wastes received from 244-UR-001 (comparable to 244-BXR Vault Tank, 244-BX-002 and 244-TXR Vault Tank, 244-TX-002). Nitric acid used in this conditioning was received from Tank 244-UR-004.

A sample of liquid was obtained from cell 3 of the 244-UR Vault on November 5, 1974 (Sample # T-9505). (Source data not available in the Waste Information Data System [WIDS] files.) The results listed below have been taken from WHC-SD-EN-ES-040, Rev. 0 and WHC-EP-0560.

- visual appearance, yellow with no solids
- pH 9.1, radiation level 1 millirad/hour, specific gravity 1.01
- cesium-137 177 microcuries/liter (670 microcuries/gallon)
- aluminum <.0013 molar (< 35 milligrams/liter)
- sodium .0732 molar (1,690 milligrams/liter)
- nitrite .000645 molar (30 milligrams/liter)
- nitrate .0306 molar (1,900 milligrams/liter)
- plutonium < 1.40 micrograms/liter (<5.34 micrograms/gallon)
- phosphate < .00356 molar (340 milligrams/liter)
- iron .0000414 molar (<1 milligram/liter)
- carbonate .0325 molar (2,000 milligrams/liter)
- strontium-89,90 5.68 microcuries/liter (21.5 microcuries/gallon)
- water 99.95%

Although the memorandum indicates that the sample was from Tank 244-UR-003, it is suspected that the sample is actually in the pit or sump since the June 7, 1977 Atlantic Richfield Company (ARCHO) internal memorandum, "Isolation Criteria for 'Auxiliary' Tanks", C. M. Walker, 1977, gives limited analytical results for Tank 244-UR-003 and sump contents as follows.

- total beta 845 microcuries/liter (3,200 microcuries/gallon)
- total alpha 0.032 microcuries/liter (0.12 microcuries/gallon).

Tank

- pH 0.7, radiation level 50 millirads/hour
- specific gravity 1.03
- cesium-137 0.87 microcuries/liter (3.3 microcuries/gallon)
- total beta 1321 microcuries/liter (5,000 microcuries/gallon)
- total alpha 0.37 microcuries/liter (1.4 microcuries/gallon)

Sump

- pH 9.0, radiation level 10 millirads/hour
- cesium-137 47.56 microcuries/liter (180 microcuries/gallon)
- total beta 66.05 microcuries/liter (250 microcuries/gallon)
- total alpha 0.1 microcuries/liter (0.38 microcuries/gallon)

WHC-SD-EN-ES-040, Rev.0 has listed the following safety issues.

- Hydrogen Buildup: Low risk since the total waste volume in the tank and sump is limited to

about 11,355 liters (3,000 gallons) of dilute liquid waste. Any hydrogen generated should readily diffuse out of the tank and vault.

- Ferrocyanide: No risk since little or no ferrocyanides are present and the tank contains mostly water.
- Organic Salts: Tributyl phosphate containing wastes were present in this tank, so some amount of organic salts is probably present. However, it is expected that this represents a low risk as the wastes are dilute.
- Flammability: Low risk as little or no flammable material and no ignition sources are present.
- Vapor Emission: Low risk because present waste content is not expected to contain significant amounts of volatile material.
- Tank Integrity: No evidence of leaks emerged in the 1970's. Present waste content is not moderately corrosive, and the design life of the tank has been exceeded. Consequently, there is moderate to high risk of tank leakage.
- Criticality Safety: Low risk (traces of plutonium only).
- Radiological Hazard: High risk because UPR-200-W-24 resulted in contamination of soils surrounding the vault. Background readings in the vault are the 1 50 millirem range.
- Heat Generation: Low risk (No Data).

SD-WM-TI-356 lists liquid level readings and cumulative change history for the tank and sump. The last reading for the tank, on July 15, 1985, was 41.9 centimeters (16.5 inches). The last reading in the sump, on July 15, 1985, was 66.7 centimeters (26.25 inches).

SubSite Code: 244-UR VAULT:4

SubSite Name: 244-UR VAULT:4, 244-UR-004

Classification: Accepted

ReClassification:

Description: The 244-UR-004 is a stainless steel process tank measuring 3 meters (10 feet) in diameter and

4.2 meters (14 feet) tall. The tank has a 31,150 liter (8,230 gallon) capacity. The UR-004 was used to store nitric acid and has been reported to be empty. This tank fed nitric acid to the UR-002 and UR-003 tanks, during the Uranium Recovery Process operation in the 1950's.

Because it was an acid feed tank, it is not believed to be radiologically contaminated.

Site Code: 200-W-95 Classification: Accepted

Site Names: 200-W-95, Contaminated Soil at 241-U **ReClassification:**

Tank Farm

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is the soil inside and adjacent to the chain link fence that surrounds the 241-U Tank Farm. Various radiological postings and warning signs are attached to the chain link fence. The interior of the tank farm complex is covered with gravel. Many risers and monitoring devices for the underground structures are visible on the surface. The individual unplanned releases associated with the 241-U Tank Farm are not separately marked or posted. Occasionally, radioactive contamination is found adjacent to the outside of the tank farm fence, resulting in a contamination zone extension around the tank farm perimeter. These areas will also be considered tank farm soil. A small area near the west access gate, outside the fence, was excavated to attempt to remove contaminated soil. This area was marked with Contamination Area signs but was covered with clean dirt and downposted to an Underground Radioactive Material area in

December 2003.

Waste Type: Process Effluent

Waste Liquid releases occurred from underground leaks in tanks and transfer lines. Airborne contamination spreads occurred from activities conducted in valve pits and diversion boxes.

Both types of releases contributed to the contamination in the soil.

The Following Sites Were Consolidated With This Site:

Site Code: 200-W-91

Site Names: 200-W-91, Underground Radioactive Material Area Adjacent to the North Side of 241-U Tank

Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-24

Site Names: UPR-200-W-24, Release from the 244-UR Vault, UN-200-W-24

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-128

Site Names: UPR-200-W-128, Contamination Release inside 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-132

Site Names: UPR-200-W-132, UN-200-W-132, 241-UR-151 Diversion Box Release

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-154

Site Names: UPR-200-W-154, 241-U-101 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-155

Site Names: UPR-200-W-155, 241-U-104 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-156

Site Names: UPR-200-W-156, 241-U-110 Leak

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-157

Site Names: UPR-200-W-157, 241-U-112 Leak

Reason: Within Boundary Of Larger Site

Site Code: 2607-WUT Classification: Accepted

Site Names: 2607-WUT ReClassification:

Site Type: Septic Tank Start Date: 1951

Site Status: Inactive End Date:

Site The 2607-WUT Septic Tank is constructed of steel and includes a drain field. It is surrounded

Description: with an "L" shaped chained area and signs that read Sanitary Tile Field. There is a depressed area

on the east end, inside the chain, that indicates a cave-in has occurred over the tile field. There is also a corrugated metal caisson, posted with a Confined Space sign, in the northwest corner of the

chained tile field.

Waste Type: Sanitary Sewage

Waste The current flow rates for the 2607-WUT septic system are unknown. This system received sanitary sewer effluent at an estimated rate of 36 cubic feet (1.02 cubic meters) per day in 1987.

Site Code: UPR-200-W-24 Classification: Accepted

Site Names: UPR-200-W-24, Release from the 244-UR ReClassification: Rejected (Consolidation) (6/13/

Vault, UN-200-W-24

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site The release was a fan shaped contamination spread from the 244-UR Vault extending southeast

Description: across Camden Avenue and 16th Street. The release occurred in 1953. No visual evidence or

posting related specifically to this release currently exists.

Waste Type: Chemicals

Waste Waste included metal waste supernate combined with nitric acid, with readings varying from 35

Description: rad/hour at the source of the contamination to a few hundred counts per minute at a distance of

305 meters (1,000 feet) from the source.

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-128 Classification: Accepted

Site Names: UPR-200-W-128, Contamination Release ReClassification: Rejected (Consolidation) (6/13/

inside 241-U Tank Farm

Site Type:Unplanned ReleaseStart Date:1971Site Status:InactiveEnd Date:1971

Site The release occurred inside the tank farm fence, adjacent to the 241-U-103 Tank. The release is

Description: not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of liquid waste contaminated with fission products.

Description:

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-132 Classification: Accepted

Site Names: UPR-200-W-132, UN-200-W-132, 241- ReClassification: Rejected (Consolidation) (6/3/2

UR-151 Diversion Box Release

Site Type:Unplanned ReleaseStart Date:1956Site Status:InactiveEnd Date:1956

Site The release occurred inside the fenced 241-U Tank Farm. The area around the 241-UR-151

Description: Diversion Box has been covered with shotcrete. The release is not separately marked or posted.

Waste Type: Process Effluent

Waste The waste was feed solution for the tributyl phosphate uranium recovery process.

Description:

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-154 Classification: Accepted

Site Names: UPR-200-W-154, 241-U-101 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type: Unplanned Release Start Date: 1946
Site Status: Inactive End Date: 1959

Site The release is the soil under and adjacent to the 241-U-101 Tank. The release is not separately

Description: marked or posted.

Waste Type: Chemicals

Waste The release consisted of bismuth phosphate metal waste and high-level supernatant waste,

Description: containing 20,000 curies of cesium-137.

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-155 Classification: Accepted

Site Names: UPR-200-W-155, 241-U-104 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1947Site Status:InactiveEnd Date:1951

Site The site is the soil under the 241-U-104 Tank. It is not separately marked or posted.

Description:

Waste Type: Chemicals

Waste From 1947 to 1956, the tank held bismuth phosphate metal waste.

Description:

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-156 Classification: Accepted

Site Names: UPR-200-W-156, 241-U-110 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type:Unplanned ReleaseStart Date:1946Site Status:InactiveEnd Date:1975

Site The tank farm is surrounded with a chain line fence and posted with radiological warning signs.

Description: The release is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of bismuth phosphate first-cycle waste and REDOX coating.

Description:

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-157 Classification: Accepted

Site Names: UPR-200-W-157, 241-U-112 Leak ReClassification: Rejected (Consolidation) (6/13/

Site Type: Unplanned Release Start Date: 1969
Site Status: Inactive End Date: 1969

Site The 241-U Tank Farm is surrounded by a chain link fence and posted with radiological warning

Description: signs. The release is not separately marked or posted.

Waste Type: Process Effluent

Waste The release consisted of bismuth phosphate first-cycle waste and recycled waste from 241-U

Description: Tanks.

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

200-UR-1

200-E-8 **Classification:** Rejected (5/31/2001) **Site Code:**

200-E-8, 200 East Trench 94 Diesel Spill **ReClassification: Site Names:**

Site Type: Unplanned Release **Start Date:** 1995

Site Status: Inactive **End Date:**

The spill occurred in the northwest portion of Trench 94. There is no longer any visible evidence Site

Description: of the spill. The spill site was remediated on June 15, 1995.

Waste Type: Oil

Waste The spilled material consisted of 38 to 57 liters (10 to 15 gallons) of diesel oil to the soil

Description:

Reported Date: May 1, 1995

Site Code: 200-E-11 Classification: Rejected (Proposed)

Site Names: 200-E-11, Diesel Oil Spill at BX-BY Tank **ReClassification:**

Farm

1995 **Site Type:** Unplanned Release **Start Date:** 1995 Inactive **End Date: Site Status:**

Site The site is a spill of non-regulated diesel oil on August 7, 1995. The oil and soil were excavated

and the site backfilled by September 7, 1995. **Description:**

Oil Waste Type:

Waste The spill was diesel oil.

Description:

Site Code: 200-E-26 **Classification:** Accepted

Site Names: 200-E-26, Heavy Equipment Storage Area, **ReClassification:**

Diesel Fuel Contaminated Soil

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Site The site is an area that was used as an equipment staging area for trucks, backhoes, compressors, **Description:**

and other heavy equipment. As of October 2001, the site no longer shows visual evidence of oil contaminating the soil. In 1996, the soil had an odor like diesel fuel, but this was not reported in

2001. The contamination noted in 1996 appeared to be spotty. An electrical receptacle marks

each end of the site.

Waste Type: Soil

Waste The soil at the site is contaminated with oil and diesel fuel.

Description:

Site Code: 200-E-29 Classification: Accepted

200-E-29, Unplanned Release From 241-**Site Names:**

ER-152 Diversion Box

ReClassification:

Site Type: Unplanned Release **Start Date: Site Status: End Date:** Inactive

Site The site is a large, irregular shaped, posted Underground Radioactive Material (URM) area. A

Description: smaller triangular shaped URM area is located adjacent to the east shoulder of Atlanta Ave., northwest of the larger, stabilized 200-E-29 area. Another small URM area is located adjacent to

a row of conex boxes, east of the larger stabilized area.

Waste Type: Animal Waste

Waste

Description:

Site Code: 200-E-42 **Classification:** Accepted

Site Names: 200-E-42, UN-216-E-34, PUREX Stack **ReClassification:**

Release, 291-A Release

Site Type: Unplanned Release **Start Date:** 1985 **Site Status: End Date:** 1994 Inactive

Site A release from the PUREX stack caused a ground surface contamination area adjacent to the **Description:** outside east of the PUREX perimeter fence measuring approximately 2.6 hectares (6.5 acres).

The site is not currently marked or posted.

Waste Type: Process Effluent

Waste Gamma Spectrum Analysis of ammonium nitrate flakes from the PUREX stack showed the **Description:**

flakes contained 2.53 microcuries of ruthenium-106, 0.05 microcuries of ruthenium-103, 2.56

microcuries of rhodium-106 and 0.01 microcuries of cesium-137.

200-E-43 **Site Code: Classification:** Accepted

Site Names: 200-E-43, Tank Car Storage Area, **ReClassification:**

Regulated Equipment Storage Area, TC-4

Spur Tank Car Storage Area

Site Type: Start Date: Storage **Site Status:** Active **End Date:**

Site This site consists of a chain link fenced portion of the TC-4 Spur located northwest of the PUREX

facility. The site was used to store railroad tank cars containing liquid radioactive material that **Description:**

require controls due to radiological dose rate conditions. The fence gate is locked. The area had been posted as a Radioactive Material Area (RMA) and an Underground Radioactive Material area (URM). However, in January 1999, It was only posted as an Underground Radioactive Material area. It is also posted with "Danger- Unauthorized Personnel Keep Out" signs. The ties

between the rails are covered with gravel.

Site Code: 200-E-53 **Classification:** Accepted

200-E-53, Contaminated Zone Adjacent to **Site Names: ReClassification:**

218-E-12B and 218-E-8

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site is an irregular, wedge shaped area with a rope barrier and posted with Soil Contamination

Description: signs.

Waste Type: Soil

Waste Description:

Site Code: 200-E-54 Classification: Accepted

Site Names: 200-E-54, Liquid Release to the **ReClassification:**

Environment from PUREX Deep Filter Bed

#1

Site Type: Unplanned Release Start Date: 1991

Site Status: Inactive End Date:

Site The release to the environment occurred as a result of a water line rupture in the basement of the

Description: 293-A building.

Waste Type: Water

Waste The water leaked into the soil over a period of 21 months.

Description:

Site Code: 200-E-56 Classification: Accepted

Site Names: 200-E-56, 241-C Waste Line Leak adjacent **ReClassification:**

to 201-C, Waste Line Leak #1

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site Status: Inactive End Date:

Site The area adjacent to the 201-C Building has been surface stabilized with flyash. The stabilized **Description:** area has been given the WIDS Site code 200-E-41 and is posted as an Underground Radioactive

Material area. The release site is not separately marked or posted, and may be combined with

200-E-41.

Waste Type: Process Effluent

Waste A leaking underground waste line caused the soil beneath the line to become contaminated. The

Description: pipeline carried waste from the 201-C Building to the 241-C Tank Farm. Maximum

contamination levels in 1957 were greater than 100 rad per hour.

Site Code: 200-E-57 Classification: Accepted

Site Names: 200-E-57, 241-C Waste Line Leak east of ReClassification:

201-C, Waste Line Leak #2

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The area around the Hot Semiworks Facility has been surface stabilized with flyash. The

Description: stabilized area is known as 200-E-41 and is posted with Underground Radioactive Material signs.

This release site is separately not marked or posted, and may be combined with 200-E-41.

Waste Type: Process Effluent

Waste A leaking underground waste line caused the soil beneath the line to become contaminated. The

Description: pipeline carried waste from the 201-C Building to the 241-C Tank Farm. Maximum

contamination levels in 1957 were greater than 100 rad per hour.

Site Code: 200-E-101 Classification: Accepted

Site Names: 200-E-101, 200 East Deep Lysimeter Site **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1971

Site Status: Inactive End Date:

Site The site consisted of three features, one open bottom pit, one closed bottom pit and an

Description: underground equipment storage room. The pits were located 34.6 meters (114 feet) apart. Both

pits were constructed from corrugated steel cylinders that were buried and backfilled with soil. In February 2001, the underground, equipment storage room access hatch and vents were found inside a chained area, just west of the dirt access road. The closed bottom pit was found to the north of the equipment room, enclosed in a triangular shaped chained area. Lysimeter access pipes were protruding up through the soil and the rim of the closed bottom lysimeter caisson were

visible.

Waste Type: Equipment

Waste The neutron probe has been left inside the closed bottom pit. The cables were weighted with 500-

Description: gram (1.1 pound) lead bricks that were backfilled in place, inside the pits. This equipment could

be considered hazardous. Verbal reports indicate that early experiments included the use of

short-lived isotope tracers.

Site Code: 200-E-103 Classification: Accepted

Site Names: 200-E-103, Radiologically Controlled **ReClassification:**

Area - South Side of PUREX, PUREX

Stabilized Area

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The waste site area is covered with gravel and currently posted with Underground Radioactive

Description: Material signs.

Waste Type: Soil

Waste The ground around the PUREX facility was contaminated from various sources during years of

Description: operation activities.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-200-E-15

Site Names: UPR-200-E-15, Overflow at 216-A-4, UN-200-E-15, UPR-200-E-13

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-E-40

Site Names: UPR-200-E-40, Release from the 216-A-36B Crib Sampler, UN-200-E-40

Reason: Within Boundary Of Larger Site

Site Code: 200-E-105 Classification: Accepted

Site Names: 200-E-105, Soil Contamination Area on the **ReClassification:**

216-B-61 Crib

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This site had been a radiologically posted area, designated as Soil Contamination Area (SCA) and

Description: Contamination Area (CA), that was located on top of the 216-B-61 Crib. The posted area had previously also extended to an area south of the crib where loose tumbleweeds had accumulated

previously also extended to an area south of the crib where loose tumbleweeds had accumulated between the south edge of the crib and a soil berm. Later, only a very small posted (1.2 by 1.2 meters) Contamination Area was located approximately 30 meters (100 feet) west of the crib. In

October 2003, the area was down posted to a Radiological Controlled Area.

Waste Type: Vegetation

Waste The contamination is a result of blown-in tumbleweeds.

Description:

Site Code: 200-E-107 Classification: Accepted

Site Names: 200-E-107, Contamination Area East of **ReClassification:**

PUREX, PUREX E Field

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was a large, irregularly shaped, posted Contamination Area. The posted contamination

Description: east of the tunnels (218-E-14 and 218-E-15) extended into the double security fence. The area

east of the Railroad Cut included the 216-A-32 Crib and the 2607-EE Sanitary Septic Tank and Tile Field, but ended at the inner security fence. In May 2000, a narrow corridor was considered a Radiological Buffer Area and separated the northern portion of the Contamination Area from the southern portion. Both sections are considered to be one waste site. The entire area was

stabilized and reposted an Underground Radioactive Material Area in 2001.

Waste Type: Soil

Waste The ground around the PUREX facility was contaminated from various sources during years of

Description: operation activities.

Site Code: 200-E-109 Classification: Accepted

Site Names: 200-E-109, Contamination Spread in **ReClassification:**

Northeast Corner of 200 East Area

Site Type: Unplanned Release Start Date: 1998

Site Status: Inactive End Date:

Site The site consists of numerous radiologically posted areas along 12th Street and Canton Avenue **Description:** inside the 200 East Area and in and around the Liquid Effluent Retention Facility outside the 200

East Area. Some areas are posted Contamination Area with a Radiological Buffer Area and others are posted High Contamination Area with a Radiological Buffer Area. The posted area

size and shape may very with future radiological surveys.

Waste Type: Vegetation

Waste Most of the contamination identified is tumbleweed and tumbleweed fragments.

Description:

Site Code: 200-E-110 Classification: Accepted

Site Names: 200-E-110, Contaminated Tumbleweed ReClassification:

Dump Site

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site In October 2003, the area was down posted to a non-controlled area. The radiological posting

Description: signs were removed. The site had been surrounded with light duty steel chain and posts and posted as a "Contamination Area." The "Contamination Area." was surrounded with light duty steel chain and posts and is posted as a "Radiological Buffer Area." The area was also posted as a "Radiologically Controlled Area." The ground is sandy soil with rocks and chunks of concrete.

The area is free of growing vegetation and the tumbleweeds have been removed. Only

tumbleweed fragments remain.

Waste Type: Vegetation

Waste The waste consisted of dried, compacted tumbleweeds.

Description:

Site Code: 200-E-115 Classification: Accepted

Site Names: 200-E-115; Contamination Area East of **ReClassification:**

241-C Tank Farm

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is a posted Contamination Area surrounded with light posts and chain. There are large

Description: weeds growing inside the posted area and there are several radiation flags visible inside the posted

area.

Waste Type: Soil

Waste The site consists of contaminated soil specks.

Description:

Site Code: 200-E-117 Classification: Accepted

Site Names: 200-E-117, Contamination Zone South of B **ReClassification:**

Plant

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site is a small, posted Contamination Area. Inside the chained area, two steel pipes extend

Description: approximately 0.6 meters (2 feet) above the ground surface. The pipes have valves on them.

Waste Type: Soil

Waste Description:

Site Code: 200-E-121 Classification: Accepted

Site Names: 200-E-121, Soil Contamination Area East ReClassification:

and West of Baltimore Avenue

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was a long, narrow area along the east side of Baltimore Avenue marked with metal posts **Description:** and chain with Soil Contamination Area signs and two smaller areas on the west side of Baltimore

Ave., also posted with Soil Contamination Area signs. The power poles inside the posted area are marked with yellow Fixed Contamination signs. In December 2003, the areas were downposted to

Underground Radioactive Material areas.

Waste Type: Soil

Waste Description:

Site Code: 200-E-123 Classification: Accepted

Site Names: 200-E-123, Contamination Area South of ReClassification:

216-B-2 Stabilized Ditches.

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site is surrounded with light duty steel posts and chain and was originally posted as a Soil **Description:** Contaminated Area. No significant vegetation was observed on the site. In 2001, the area wa

Contaminated Area. No significant vegetation was observed on the site. In 2001, the area was covered with clean backfill material and downposted to an Underground Radioactive Material

Area.

Waste Type: Soil

Waste Description:

Site Code: 200-E-124 Classification: Accepted

Site Names: 200-E-124, URM on East Side of 275-EA ReClassification:

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is posted as an Underground Radioactive Material Area with steel posts. The site has been stabilized with approximately 0.3 meters of clean soil. A few tumbleweeds were observed growing on the site. Railroad tracks run through the site and are buried under the stabilization soil. The contamination area is where railroad cars were parked and offloaded into the 275-EA Building.

Waste Type: Soil

Waste Description:

Site Code: 200-E-125 Classification: Accepted

Site Names: 200-E-125, Contamination Area Northwest ReClassification:

of 244-AR Building.

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is posted as a Contamination Area with light duty posts and chain. The surface is very

Description: sandy soil. No vegetation was observed.

Waste Type: Soil

Waste Description:

Site Code: 200-E-128 Classification: Accepted

Site Names: 200-E-128, Radioactive Contamination ReClassification:

"Hot Spot" Under Gravel Road

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The area where the contamination is located is marked with two Underground Radioactive

Description: Material signs, on steel posts. The posts are located on the north and south sides of the road. The

contamination is located between the signs, under the surface of the gravel road.

Waste Type: Soil

Waste Description:

Site Code: 200-E-129 Classification: Accepted

Site Names: 200-E-129. Stabilized Area on East Side of **ReClassification:**

B Plant Railroad Cut

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The area has been covered with gravel and posted with Underground Radioactive Material signs.

Description:

Waste Type: Soil

Waste Description:

Site Code: 200-E-130 Classification: Accepted

Site Names: 200-E-130, Stabilized Area on West Side ReClassification:

of B Plant Chemical Spur

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is covered with fine gravel and posted with Underground Radioactive Material (URM)

Description: signs.

Waste Type: Soil

Waste Description:

Site Code: 200-E-135 Classification: Accepted

Site Names: 200-E-135, Contamination Area South of **ReClassification:**

241-C Tank Farm

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is surrounded with steel posts and chain with Underground Radioactive Material signs attached to the chain. An abandoned, above ground steam pipe is located inside the posted area.

Site Code: 200-E-139 Classification: Accepted

Site Names: 200-E-139, Contamination Area North of C **ReClassification:**

Farm

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site A large posted Underground Radioactive Material area is located on the north side of 8th Street.

Description: It contains growing vegetation (Rabbitbrush and tumbleweeds). A small posted Underground Radioactive Material area is located on the south side of 8th Street. This area has been covered

with gravel.

with graver.

Site Code: 200-W-9 Classification: Accepted

Site Names: 200-W-9, Project W291 Excavation VCP ReClassification:

Contamination

Site Type: Unplanned Release Start Date: 1994

Site Status: Inactive End Date:

Site The site is currently a gravel area with two metal caissons. The area is not marked or posted. The

Description: tops of the caissons are labeled MH T-1 and MH T-2.

Waste Type: Demolition and Inert Waste

Waste Chemical sewer, 3000 dpm beta/gamma on 100 cm² (15.5 in²) smear on the 10-in (25 cm)

Description: vitrified clay pipe. 5500 dpm direct reading.

Site Code: 200-W-14 Classification: Accepted

Site Names: 200-W-14, 200 West Heavy Equipment **ReClassification:**

Storage Area

Site Type:Dumping AreaStart Date:Site Status:ActiveEnd Date:

Site The site is a heavy equipment (including cranes, forklifts, diesel generators, backhoes, vehicles)

Description: parking area with five or six large spots of petroleum contaminated soil. Contaminated soil is encountered down to a depth of 0.61 meters (2 feet) or more. During the 1995 site visit, the

equipment continued to overflow and leak; no drip pans or containment were used.

Waste Type: Oil

Waste The soil at the site contains petroleum (oil, fuel, etc.) from leaky and overflowing (especially

Description: during hot weather) equipment (cranes, generators, front end loaders, forklifts, etc.).

Reported Date: May 7, 1995

Site Code: 200-W-15 Classification: Accepted

Site Names: 200-W-15, S-Plant Project W-087 Hexone ReClassification:

Discovery

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The pipe trench where the hexone soil was found has been back filled to grade with soil originally

Description: removed from the excavation. Hexone contaminated soil was also put back into the excavation.

There is currently no visual evidence of this excavation on the surface. The area is now under

asphalt. It is not marked or posted.

Waste Type: Chemical Release

Waste The waste consists of soil containing hexone and surfactants. The reported date was June 1995.

Description:

Site Code: 200-W-53 Classification: Accepted

Site Names: 200-W-53, UPR-200-W-166, UN-216-W- ReClassification:

31

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This site was an area of surface soil contamination located east of the 207-T Retention Basins. It

Description: was identified in 1994 resulting in approximately 155,706 square feet of land being marked and

posted as a Soil Contamination Area (SCA). The contaminated soil was and placed inside the 207-T Retention Basin. scraped area is currently posted as an Underground Radioactive Material

Area (URM).

Waste Tyne Soil

viasie Type. Don

Waste Contaminated soil specks were identified.

Description:

Site Status:

Site Code: 200-W-54 Classification: Accepted

Site Names: 200-W-54, Contamination Migration from ReClassification: Rejected (Consolidation) (6/13/

241-SX Tank Farm

Inactive

Site Type: Unplanned Release Start Date:

Site This site is an expanding area of contamination migration. The original unplanned release was

Description: defined in 1997. It was a large, irregular shaped Soil Contamination Area (SCA) located on the

east side of 241-S/SX Tank Farms. In 1997, it measured approximately 175 meters (575 feet) by 100 meters (330 feet). Another Global Positioning Survey was done in 1998 by Bruce Markes. The posted Soil Contamination Area had been extended approximately 50 meters (165 feet) to the west (up to the tank farm fence) and approximately 200 meters (660 feet) in the north-south direction. A site visit in August 2000 found multiple additional radiologically chained and posted areas in this vicinity. There is also one separately posted Contamination Area located north of

End Date:

241-SY Tank Farm, across a gravel road.

Waste Type: Soil

Waste The posted soil contamination areas are the result of contamination migration out of the tank

Description: farms.

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: 200-W-63 Classification: Accepted

Site Names: 200-W-63, Contaminated Concrete Pad ReClassification:

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was a "T" shaped concrete pad that had been posted with Surface Contamination Area

Description: signs. A site visit in September 1999 found the pad had been covered with gravel and reposted as

Underground Radioactive Material.

Waste Type: Equipment

Waste Description:

Site Code: 200-W-64 Classification: Accepted

Site Names: 200-W-64, 2724-W Contaminated Laundry ReClassification:

Facility Building Foundation

Site Type: Foundation Start Date: 1950

Inactive **End Date:** 1994 **Site Status:**

The building foundation is posted with "Underground Radioactive Material" signs. There is also Site an area approximately 3 meters (10 feet) by 4.5 meters (15 feet) on the north side of the **Description:**

foundation that is posted as "Fixed Contamination". Several drains and pipes were observed on

the concrete pad. All drains and pipes were either capped or grouted. There are three

radiologically posted manholes adjacent to the northwest corner of the foundation. The manholes are likely to be a portion of the process sewer. Six connex storage units and several equipment items such as pipe, valves, flanges, fence posts were observed on the southeastern portion of the

pad.

Waste Type: Construction Debris

Waste

Description:

The site is the cement foundation of the contaminated laundry facility.

Site Code: 200-W-66 **Classification:** Rejected (Proposed)

200-W-66, Oil Spill at JCI Annex feeding **Site Names: ReClassification:**

283-W/262-WC.

Start Date: Site Type: Unplanned Release

Site Status: Inactive End Date: 1998

Site The contaminated soil was removed and the site has been backfilled to grade level with crushed **Description:**

gravel on 12/29/98. No visual evidence of diesel stained soil and no diesel fumes were observed a few days later, during an inspection on 1/4/99.

Waste Type: Soil

Waste

The waste is diesel contaminated soil. The type of diesel spilled was 70% Low Sulfur Diesel Dyed #2 and 30% Low Sulfur Strove Dyed #1. The contaminated soil was excavated and **Description:**

backfilled with clean fill to grade level by R.H. Smith Distributing. R.H. Smith Distributing has contracted White Shield Environmental of Grandview, WA to remediate the contaminated soil. White Shield Environmental has recommended the Alpha bioremediation process to treat the

contaminated soil that was removed on 12/29/98.

Site Code: 200-W-67 **Classification:** Accepted

Site Names: 200-W-67, Contaminated Soil at the Corner **ReClassification:**

of Cooper and 16th Street

Start Date: 1998 **Site Type:** Unplanned Release

Site Status: Inactive **End Date:**

The site is currently posted as an Underground Radioactive Material area.

Description:

Waste Type: Soil

Waste

Description:

Site Code: 200-W-72 **Classification:** Rejected (Proposed)

ReClassification: Site Names: 200-W-72, 200-ZP-1 Pump and Treat

Unplanned Release

Site Type: Unplanned Release Start Date: 2000

Site Status: Inactive End Date:

Site There is no visual evidence of the release.

Description:

Waste Type: Water

Waste The waste was groundwater containing a total of 0.7 pounds of carbon tetrachloride.

Description:

Site Code: 200-W-73 Classification: Accepted

Site Names: 200-W-73, Contaminated Debris near **ReClassification:**

Railroad Track (east of 218-W-2A)

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 2000

Site The site is currently covered with gravel and posted as an Underground Radioactive Material **Description:** Area. It had been surrounded with light post and chain and posted as a Contamination Area.

Waste Type: Misc. Trash and Debris

Waste The waste consists of contaminated wood and metal debris.

Description:

Site Code: 200-W-77 Classification: Accepted

Site Names: 200-W-77, Posted Contamination Area

East of 216-U-14 Ditch

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was a small area marked with posts and chain, posted with Contamination Area signs. **Description:** After being backfilled with gravel, the area was downposted to Underground Radioactive Material.

ReClassification:

Waste Type: Vegetation

Waste

Description:

Site Code: 200-W-80 Classification: Accepted

Site Names: 200-W-80; Mound of Contaminated Soil ReClassification:

Southwest of T Plant

Site Type:Spoils Pile/BermStart Date:Site Status:InactiveEnd Date:

Site The site is a gravel area surrounded with post and chain and Underground Radioactive Material

Description: Area signs. The site had been a mound of soil surrounded with radiation rope and posted with

Contamination Area signs. The mound was approximately 1.5 meters (5 feet) high, 8.2 meters

(27 feet) long, and 3 meters (10 feet) wide.

The mound of soil and the surrounding area contained many pieces of asphalt, similar to that in the adjacent parking lot of T Plant. The mound and surrounding area is covered by a thin growth of cheatgrass and tumbleweeds.

About 3 meters (10 feet) east of the site is a small posted URM, with one capped well inside the posted area and one just outside. The capped well outside is locked and has a warning of potential contamination.

Across the northern part of the contamination area are fence posts marking an underground pipeline, traveling east-west, posted as a URM. Another posted underground pipeline goes under the mound of soil, in a north-south direction, and is also posted as a URM.

Waste Type: Soil

Waste Description:

The site consists of a mound of soil surrounded with radiation rope and Contamination Area signs. A survey of the mound surface did not detect any contamination. It is not known if there

is contamination inside the mound.

Site Code: 200-W-81 Classification: Accepted

Site Names: 200-W-81; Contaminated Tumbleweed ReClassification:

Fragments Along Railroad Track East of

218-W-3AE

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is three posted Contamination Areas on the railroad track east of the burial ground, south

Description: of the 610 Gate of the 200 West Area fence.

Waste Type: Soil

Waste

Description:

Site Code: 200-W-83 Classification: Accepted

Site Names: 200-W-83, Contamination Area North of **ReClassification:**

2727 W

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is a posted Contamination Area extending across the railroad track north of the 2727-W

Description: Sodium Storage building. The tracks are no longer used.

Waste Type: Soil

Waste

Description:

Site Code: 200-W-85 Classification: Accepted

Site Names: 200-W-85, Soil Contamination Area East ReClassification:

of 2727 W

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site was originally a posted Soil Contamination Area. The posting surrounded some growing

Description: rabbit brush and grass. No soil discoloration or disturbance was apparent. In December 2001,

the area was covered with clean backfill material and downposted to an Underground Radioactive

Material Area.

Waste Type: Soil

Waste

Description:

Site Code: 200-W-86 Classification: Accepted

Site Names: 200-W-86, Contamination Area Around **ReClassification:**

Light Pole

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was originally a small, graveled Soil Contamination Area around an active (in use) pole

Description: with a street light attached, near the intersection of the U plant railroad sour and Bridgeport

Avenue. In December 2001, the utility pole was removed and the area was covered with clean

backfill. The area was downposted to Underground Radioactive Material.

Waste Type: Equipment

Waste The history (source and amount of contamination) of the site is unknown, but the power pole is

Description: surrounded by a small Soil Contamination Area.

Site Code: 200-W-87 Classification: Accepted

Site Names: 200-W-87, Unplanned Release on

Chemical Spur Railroad Track Northwest

of 221-U Plant

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was originally a posted Contamination Area on a portion of the railroad spur. The spur is

Description: no longer active. In December 2001, the area was covered with clean backfill material and

downposted to an Underground Radioactive Material Area.

Waste Type: Soil

Waste

Description:

Site Code: 200-W-89 Classification: Accepted

Site Names: 200-W-89, 252-U, U Plant Electrical

Substation, C8S17 Substation, U-Cat

Substation

ReClassification:

ReClassification:

Foundation **Start Date: Site Type:**

Site Status: Inactive **End Date:**

The site is a posted, gravel Underground Radioactive Material (URM) area where the 252-U Site

Description: Electrical Substation had been located. A large electrical transformer, surrounded with

Radioactive Material signs, is located in the center of the URM. The transformer has Fixed

Contamination Area signs attached to it on all four sides.

Waste Type: Soil

Waste The waste in this area is residual radioactive contamination in soil. After the electrical **Description:** substation was decommissioned, a single contaminated electrical transformer and a posted

> Underground Radioactive Material area remains. Laboratory analysis of metal and ceramic pieces and asbestos fibers (August 1998) identified cesium 134 and cesium 137. Some barium, cadmium, chrome and lead was also noted. No PCB's were identified. The radioactive contamination is assumed to have been deposited on the substation from U Plant and 224-U

stack emissions.

200-W-90 **Site Code: Classification:** Accepted

Site Names: 200-W-90, Underground Radioactive **ReClassification:**

Material Areas posted along 23rd Street in

200 West Area

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

The site is comprised of three posted Underground Radioactive Material areas. Two are located Site **Description:**

on the south side of 23rd Street, across from the 218-W-2A Burial Ground. One is located further

east, on the south side of 23rd Street, across from the 241-T Tank Farm.

Waste Type: Soil

Waste **Description:**

Site Code: 200-W-91 **Classification:** Accepted

Site Names: 200-W-91, Underground Radioactive **ReClassification:** Rejected (Consolidation) (6/13/

Material Area Adjacent to the North Side

of 241-U Tank Farm

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

The site is a large, irregular shaped area. The area has been covered with clean gravel and posted Site

Description: with Underground Radioactive Material signs. The 2607-WUT sanitary tile field is located

adjacent to the western edge of this stabilized zone.

Waste Type: Soil

Waste **Description:**

The Site Was Consolidated With:

Site Code: 200-W-95

Site Names: 200-W-95, Contaminated Soil at 241-U Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: 200-W-106 Classification: Accepted

Site Names: 200-W-106, Soil Contamination Area

Adjacent to 200-W-55

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site Soil contamination was found and posted on February 13, 2003.

Description:

Site Code: 600-37 Classification: Accepted

Site Names: 600-37, Browns Wells, Johnson's Wells ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The unit consists of four steel tanks and four french drains. Three of the tanks are approximately 3 meters (10 feet) long by 1.5 meters (5 feet) in diameter, and the fourth tank is 6.7 meters (22 feet) long by 1.5 meters (5 feet) in diameter. The tanks had been resting on railroad ties approximately 1.2 meters (4 feet) above ground. A range fire burned through the area in June 2000. The southern-most tank was untouched by the fire and the tank supports remain intact. The wooden support structures under the other three tanks were burned and the tanks are now sitting on the ground. The french drains are double encased with pipe used to center the inner casing within the outer casing. Three of the french drains have a inside diameter of 38 centimeters (15 inches) and are approximately 4.9 meters (16 feet) deep. The fourth french drain has a much larger diameter. The french drains were unaffected by the fire in June 2000. There is a dirt road that runs through the unit that appears to be surfaced with used oil.

ReClassification:

Waste Type: Water

Waste Raw water was assumed to have been disposed of in the french drains, however sample testing

Description: should be conducted in the unit.

Site Code: 600-256 Classification: Accepted

Site Names: 600-256, Atmospheric Dispersion ReClassification:

Modeling Towers, Ethylene Glycol Release

Site Type:Unplanned ReleaseStart Date:1965Site Status:InactiveEnd Date:1995

Site The concrete foundation pads and portions of the tower structures still remain in the field. There

Description: is no visual evidence of a spill at this location. The site is not marked or posted.

Waste Type: Chemical Release

Waste While dismantling an atmospheric testing tower, approximately 2.7 liters (0.72 gallons) of ethylene glycol was released to the soil on 4-10-95. The damp contaminated soil was removed

and place in a barrel. Each year approximately 5.5 liters (1.5 gallons) of ethylene glycol needed to be added to the tower legs. During the 30 year use of the eight towers, it is possible that a maximum of 170 liters (45 gallons) of ethylene glycol could have been released over time to the soil near the bases of the eight towers.

600-260 **Site Code: Classification:** Accepted

Site Names: 600-260, Roped Off Area Near **ReClassification:**

Meteorological Tower

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

Site The site's vegetation cover is composed of mature sagebrush and grasses and is fairly complete.

The area is surrounded by mature sagebrush obscuring the fallen T-posts. **Description:**

Waste Type: Misc. Trash and Debris

After discovering the roped area in 1999, the site was investigated and a radiation survey was Waste **Description:**

done. No radioactive contamination was found. No soil discoloration or items were found to indicate any other waste in the area.

Site Code: 600-262 **Classification:** Accepted

600-262, West Lake Test Crib **ReClassification: Site Names:**

1959 Crib **Start Date:** Site Type: Site Status: Inactive **End Date:** 1962

The site includes a test crib and twenty one monitoring wells. The entire test site area is **Description:** surrounded by metal fence posts. No warning signs or postings are visible at the site. The test crib has a wooden frame and a wooden lid, which has been set aside. Two approximately 2.5 centimeter (1 inch) diameter pipes are visible entering the crib and appear to enter the soil. Although only 7 wells are mentioned in HW-61476, 12 others are identified in HW-71573.

Twenty one 5.1 centimeter (2 inch) diameter metal pipes or monitoring wells are currently visible surrounding the crib. Some of the wells are approximately 0.9 meters (3 feet) tall and are galvanized while others are only approximately 0.3 meters (1 foot) tall and are not galvanized. In three out of the four wells examined, water was visible. Also visible at the site were wood debris, metal debris, wire, empty glass bottles, a wooden box and excess 5.1 centimeter (2 inch) pipe. The ground surface is gently rolling. Northeast of the test crib is a depressed area approximately

the same size as the crib. The soil is sandy and no discoloration is apparent. Vegetation at the

site is composed primarily of grasses but includes a few small shrubs.

Water **Waste Type:**

Waste A concentrated solution of calcium nitrate and strontium-85 was prepared in the laboratory. 900 **Description:** milliliters of the concentrated solution was added to a 55 gallon drum containing sanitary water.

The resulting solution contained 600 parts per million of calcium and 0.00013 microcuries per milliliter. During the month of May, 1959, 34,200 liters (9000 gallons) of this solution was discharged to the ground through the wooden crib box. In 1961, another test was done at this site. A total of 61,560 liters (16,200 gallons) of water spiked with calcium nitrate and strontium-

85 was injected into the crib.

600-275 **Site Code:**

Classification: Accepted

Site Names: 600-275, 218-W-14, Igloo Site, Army

Ammo Site, Regulated Storage Area

ReClassification:

Foundation **Site Type:**

Start Date: 1964

Site Status: Inactive

Site

Description:

The bunkers, guard house and fence have been removed. Currently the access roads are visible with bladed areas where the seven bunkers had been located. Rectangular mounds of soil, each

End Date:

approximately one meter (3 feet) high, remain where the igloo structures had been located.

Site Code: UPR-200-E-2 **Classification:** Accepted

UPR-200-E-2, UN-200-E-2, Spotty **Site Names:**

Contamination Around the B and T Plant

Stacks

Site Type: Unplanned Release **Start Date:** 1947

ReClassification:

Site Status: Inactive **End Date:**

Site This unplanned release is not physically posted or marked.

Description:

Waste Type: Chemicals

Spotty ground contamination around the B Plant stack. Most stack releases consisted of Waste

ruthenium. **Description:**

Site Code: UPR-200-E-10 Classification: Accepted

1957

UPR-200-E-10, Contaminated Purex **Site Names:**

Unplanned Release

Railroad Spur, UN-200-E-10

ReClassification:

Start Date:

Site Type:

Inactive **End Date: Site Status:**

A contamination spread occurred along the railroad tracks while transporting tube bundles from Site

PUREX to the burial ground. The release is not separately marked or posted. **Description:**

Waste Type: Soil

Waste Loose contamination from concentrator tube bundles spread from the PUREX crane, into the

Description: tunnel and onto the railroad right-of-way.

Site Code: UPR-200-E-11 Classification: Accepted

UPR-200-E-11, Railroad Track **Site Names:**

Contamination Spread, UN-200-E-11

ReClassification:

Site Type: Unplanned Release **Start Date:** 1957

Site Status: Inactive **End Date:**

This unplanned release is no longer marked or posted. Portions of the TC-4 Spur (a.k.a. UPR-Site

200-E-88) and a section of track south of the 218-E-5 Burial Ground (UPR-200-E-95) have been **Description:**

covered with dirt and posted with Underground Radioactive Material signs.

Waste Type: Water

Waste The release consisted of fission products dripping from a railroad car transporting material from

Description: PUREX to the burial ground.

Site Code: UPR-200-E-12 Classification: Accepted

Site Names: UPR-200-E-12, Contaminated Purex ReClassification:

Railroad Spur, UN-200-E-12

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site This unplanned release is no longer marked or posted. Portions of the TC-4 Spur (a.k.a. UPR-Description: 200-E-88) and a section of track south of the 218-E-5 Burial Ground (UPR-200-E-95) have been

covered with dirt and posted with Underground Radioactive Material signs.

Waste Type: Water

Waste Contaminated liquid with readings ranging from 40 to 1,700 millirads/hour dripped on the railroad track during transport of a burial box containing failed process jumpers. The dose rate

on the burial box was 450 millirads/hour at 45.8 meters (150 feet).

Site Code: UPR-200-E-20 Classification: Accepted

Site Names: UPR-200-E-20, Contaminated Purex

Railroad Spur, UN-200-E-20

Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The site is located at the PUREX railroad right-of-way. The release is not separately marked or

ReClassification:

Description: posted.

Site Type:

Waste Type: Process Effluent

Waste While transporting PUREX tube bundles to the burial ground via railcar, spotty contamination

Description: was found on the railroad track.

Site Code: UPR-200-E-22 Classification: Accepted

Site Names: UPR-200-E-22, 291-A-1 Stack Fallout ReClassification:

Area, UN-200-E-22,

Site Type: Unplanned Release Start Date: 1959

Site Status: Inactive End Date:

Site The ground around the PUREX 291-A Stack was contaminated in 1959. The release is no longer

Description: marked or posted.

Waste Type: Soil

Waste The soil around the 291-A stack was contaminated with fallout of mixed fission products and

Description: ruthenium.

Site Code: UPR-200-E-28 Classification: Accepted

Site Names: UPR-200-E-28, Contamination Release **ReClassification:**

Inside the PUREX Exclusion Area, UN-

200-E-28

Site Type: Unplanned Release Start Date: 1961

Site Status: Inactive End Date:

Site This release occurred in the eastern half of the PUREX exclusion area. The exclusion area is

Description: posted as a Contamination Area. The release can not be individually distinguished within the

zone.

Waste Type: Process Effluent

Waste Fission product specks were released from a PUREX trap pit due to process vessel steam coil

Description: failures.

Site Code: UPR-200-E-33 Classification: Accepted

Site Names: UPR-200-E-33, Contaminated Purex ReClassification:

Railroad tracks, UN-200-E-33

Site Type: Unplanned Release Start Date: 1964

Site Status: Inactive End Date: 1964

Site A contamination spread occurred on the PUREX railroad bed and right-of-way to the burial **Description:** ground. The contamination was located both inside and outside the PUREX exclusion fence. The

contamination inside the fence is considered part of the PUREX Railroad Cut (Waste Information

Data System [WIDS] site code 200-E-44).

Waste Type: Chemicals

Waste A description of the waste is not available from documents. Contamination resulted from a

Description: leaking tube bundle in a burial box on a railcar.

Site Code: UPR-200-E-36 Classification: Accepted

Site Names: UPR-200-E-36, Road Contamination North **ReClassification:**

of Semiworks, UN-200-E-36

Site Type: Unplanned Release Start Date: 1967

Site Status: Inactive End Date:

Site The site is described as contamination in a fan-shaped area 150 yards (137 meters) wide and 300 **Description:** yards (275 meters) long, on the road and unpaved land north of A cell at the Strontium Semiworks.

Waste Type: Process Effluent

Waste The release contaminated the area with beta/gamma with readings of 30,000 to 80,000 counts

Description: per minute from two pumps removed from the Semiworks A cell.

Site Code: UPR-200-E-37 Classification: Accepted

Site Names: UPR-200-E-37, Contamination East of Hot **ReClassification:**

Semi-Works, UN-200-E-37, UN-216-E-37

Site Type:Unplanned ReleaseStart Date:1976Site Status:InactiveEnd Date:1989

Site There is currently no physical evidence of the unplanned release site. It is no longer marked or

Description: posted.

Waste Type: Process Effluent

Waste A contamination spread (particulate) was caused by the removal of two Semiworks A cell

Description: pumps, with a maximum beta/gamma reading of 200 millirad/hour.

Site Code: UPR-200-E-43 Classification: Accepted

Site Names: UPR-200-E-43, Road Contamination near **ReClassification:**

241-BY Tank Farm, UN-200-E-43

Site Type: Unplanned Release Start Date: 1972

Site Status: Inactive End Date:

Site The location of this release is not marked or posted.

Description:

Waste Type: Process Effluent

Waste The road contaminated with beta/gamma with readings of 1,000 to 100,000 counts per minute

Description: while transporting a pump from 241-BY-102 to the burial ground.

Site Code: UPR-200-E-49 Classification: Rejected (Proposed)

Site Names: UPR-200-E-49, Roadway Contamination, **ReClassification:**

UN-200-E-49

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The sites of the release are not currently marked or posted.

Description:

Waste Type: Process Effluent

Waste The road was contaminated with beta/gamma with readings of 100,000 counts/minute while

Description: transporting a themocouple from the 241-A-104 tank to the burial ground.

Site Code: UPR-200-E-50 Classification: Accepted

Site Names: UPR-200-E-50, Soil Contamination at the **ReClassification:**

Overground Equipment Storage Yard, UN-

200-E-50

Site Type: Unplanned Release **Start Date:** 1974

Site Status: End Date: Inactive

In 1974, an area of ground contamination was identified that measured from 15 to 30 meters (50 Site

to 100 feet) wide and 137 meters (450 feet) long. A 1997 site visit could not identify any posting **Description:**

or markings for this release site.

Waste Type: Soil

Waste Wind blew contaminated from contaminated pumps and equipment that had been stored at this

Description: location out of the posted radiation zone. Maximum beta/gamma readings of 3,000 to 100,000

counts/minute were found on a swath of ground near the storage area.

Site Code: UPR-200-E-52 **Classification:** Accepted

ReClassification: Site Names: UPR-200-E-52, UN-200-E-52,

Contamination Spread Outside the North

Side of 221-B

1975 Site Type: Unplanned Release **Start Date:**

End Date: Site Status: Inactive

Site In 1998, a 3 meter (10 foot) by 15.25 meter (50 foot) area was posted with Contamination Area

Description:

Waste Type: Process Effluent

Beta/gamma with readings up to 20,000 counts per minute were found in the soil under the Waste **Description:**

steam pressure relief discharge pipe from the E-5-2 Strontium Concentrator. Another area on

the north side of 221-B was contaminated up to 100,000 counts per minute.

Site Code: UPR-200-E-54 **Classification:** Accepted

UPR-200-E-54, UN-200-E-54, **Site Names: ReClassification:**

Contamination Outside 225-B Doorway

Unplanned Release **Start Date:** 1977 **Site Type:**

Site Status: Inactive **End Date:**

There is a sign posted on the south wall of 225-B, next to Door 130, that reads UPR-200-E-54.

There is no radiological posting around the doorway or in the soil adjacent to the concrete door **Description:**

pad.

Waste Type: Water

Waste Water seeping under an exit door caused beta/gamma with readings of 25 millirads/hour direct

and 20,000 counts per minute smearable on the concrete pad outside the door at 225-B. **Description:**

Contamination readings in the soil were 10,000 counts per minute. The contaminated liquid was

from a manipulator decontamination activity.

Site Code: UPR-200-E-55 Classification: Accepted

Site Names: UPR-200-E-55, UN-200-E-55, ReClassification:

Contamination Spread South of B Plant

Site Type: Unplanned Release Start Date: 1979

Site Status: Inactive End Date:

Site A single post with a sign that reads UPR-200-E-55 is currently located under an aboveground line

Description: . The area is not radiologically posted.

Waste Type: Chemicals

Waste While changing the K-3 filter, wind blew beta/gamma contamination (particles), with readings of

Description: 5,000 to 30,000 counts per minute, outside the radiation zone.

Site Code: UPR-200-E-58 Classification: Accepted

Site Names: UPR-200-E-58, Contaminated ReClassification:

Tumbleweeds found on dirt road, UN-200-

E-58

Site Type: Unplanned Release Start Date: 1980

Site Status: Inactive End Date:

Site Since the contaminated tumbleweeds were removed in 1980, the location is not currently marked.

Description:

Waste Type: Vegetation

Waste The maximum beta/gamma with reading on the tumbleweed fragments was 100,000 counts per

Description: minute.

Site Code: UPR-200-E-60 Classification: Rejected (Proposed)

Site Names: UPR-200-E-60, UN-216-E-60, ReClassification:

Radioactively Contaminated Dirt Spill, UN-

200-E-60

Site Type:Unplanned ReleaseStart Date:1981Site Status:InactiveEnd Date:1981

Site The 1981 release site was cleaned up immediately, and thus is not marked or posted. It is a paved

Description: roadway.

Waste Type: Soil

Waste Radioactive contaminated soil, with beta/gamma readings from 200 to 500 counts per minute **Description:** (with one pebble to 3,000 counts per minute), was spilled on the roadway while in route to the

burial ground. The contaminated soil was removed from a crib near 203-A.

Site Code: UPR-200-E-62 Classification: Rejected (Proposed)

Site Names: UPR-200-E-62, Transportation Spill near ReClassification:

200-E Burning Ground, UN-216-E-62, UN-

200-E-62,

Site Type:Unplanned ReleaseStart Date:1982Site Status:InactiveEnd Date:1982

Site The 1982 release site was an area approximately 5 centimeters (2 inches) wide and 30 meters

Description: (100 feet) long on a hill near the 200 East Overground Storage Area. The release was cleaned up

within 3 days. The site is no longer marked or posted.

Waste Type: Process Effluent

Waste While transporting a pressure test assembly, contaminated liquid dripped onto the dirt road.

Description: Contamination consisted of beta/gamma readings to 350 millirads/hour.

Site Code: UPR-200-E-63 Classification: Accepted

Site Names: UPR-200-E-63, Radioactively **ReClassification:**

Contaminated Tumbleweeds, UN-216-E-

63, UN-200-E-63

Site Type: Unplanned Release Start Date: 1981

Site Status: Inactive End Date:

Site This site is no longer marked or posted.

Description:

Waste Type: Vegetation

Waste The tumbleweeds were contaminated to 100,000 counts/minute with beta/gamma readings to

Description: 6,000 disintegrations/minute.

Site Code: UPR-200-E-69 Classification: Accepted

Site Names: UPR-200-E-69, UN-216-E-69, Railroad ReClassification:

Car Flush Water Radioactive Spill, UN-200-

E-69

Site Type: Unplanned Release Start Date: 1984

Site Status: Inactive End Date:

Site The railroad tunnel area has a 1.2 meter (4 foot) high fence along the side of the tracks. The area

Description: was posted with Radiologically Controlled Area signs. In 1998, the track from the tunnel door to Atlanta Ave. was covered with gravel and reposted as Underground Radioactive Material.

Waste Type: Water

Waste Water dripped from a burial box containing waste was from 225-B and the 221-B canyon. The

Description: contamination consists of beta/gamma contamination, with readings to 4,000 to 20,000 counts

per minute.

Site Code: UPR-200-E-79 Classification: Accepted

Site Names: UPR-200-E-79, UN-216-E-7, 242-B to 207- ReClassification:

B Line Break, UN-200-E-79

Unplanned Release **Start Date:** 1953 **Site Type:**

End Date: Site Status: Inactive

The area where the release occurred is delineated by light duty posts and chain measuring Site approximately 7.6 meters (25 feet) wide and 61 meters (200 feet) long. It is posted with **Description:**

Underground Radioactive Material signs.

Waste Type: Process Effluent

The release consisted of approximately of 10 curies Mixed Fission Products (MFP) from the Waste

Description: pipeline.

Accepted **Site Code:** UPR-200-E-83 Classification:

Site Names: UPR-200-E-83, UN-216-E-11, BC Cribs **ReClassification:**

Controlled Area, BC Controlled Area, UN-

200-E-83

1958 **Site Type:** Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Periodic radiological surveys conducted between 1958 and 1998 have identified radiological Site

Description: contamination outside the boundaries of the engineered crib and trench structures. Each survey effort redefined the soil contamination boundaries. The size and shape of the posted area varied with each survey. Radiological surveys (1996-1998) identified contamination extending south

from Route 4 South to Army Loop Road and extending east to the Central Landfill area.

Waste Type: Soil

Site Type:

Waste The contamination spread consists of radioactive feces (and urine) from coyotes and rabbits. **Description:**

Strontium-90 (81 curies) and cesium-137 (14 curies) are the major contaminants in the feces.

Specks of contamination found in the soil may be wind blown particulates from filling the open trenches with waste (1952-1958) and major contamination events in 200 East Area. In 1999, the cryptogamic layer and underlying soils were analyzed for a selected number of radionuclides based on the contaminant of concern list. Analysis included plutonium-239, americium-241,

cesium-37 and strontium-90.

Site Code: UPR-200-E-88 **Classification:** Accepted

ReClassification: UPR-200-E-88, TC-4 Spur Contaminated **Site Names:**

Railroad Track, UN-216-E-88, UN-216-E-16, UN-200-E-88. Ground Contamination Around the Western Purex Railroad Spur

Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

The unfenced portion of the spur was posted as a "Contamination Area." Additional posting on Site portions of the spur included "Soil Contamination Area" and "Buffer Area." The spur is tracked **Description:**

with the property number "F187418". The site was interim stabilized in December 1998. The stabilized area was posted as an Underground Radioactive Material area. A chain link fenced

storage area is located on the north end of the spur (see site code 200-E-43).

Process Effluent **Waste Type:**

Waste **Description:** The contamination spread consisted of radioactive particulates from contaminated railcars using the tracks. Surface radiological surveys performed in 1991 identified contamination of 20,000 to 60,000 disintegrations per minute on the railroad track near where the tank cars were being staged. South of the tank cars, along the railway, contaminated areas of 2,000 to 20,000 disintegrations/minute were also identified.

Classification: Site Code: UPR-200-E-89 Accepted

Site Names: UPR-200-E-89, UN-216-E-17, UN-200-E-**ReClassification:**

> 89, Contamination Migration to the North, East & West of BX-BY Tank Farms

Site Type: Unplanned Release **Start Date:** 1978

Site Status: End Date: Inactive

Site The site is located north of the 241-BY Tank Farm. In 1991, the contaminated soil was

consolidated on top of the 216-B-43 through 216-B-50 Cribs and stabilized with a layer of clean **Description:**

dirt. The site also includes an irregularly shaped drill pad area and a contaminated concrete pad that were also covered with clean dirt. All of the stabilized areas of UPR-200-E-89 were zoned

off against casual entry and marked with "Underground Radioactive Material" signs.

Waste Type: Process Effluent

Airborne particulate matter contaminated an area near the 241-BY Tank Farm. The matter was Waste **Description:**

resuspended by wind. Beta and gamma contamination with readings of 500 to 2,000 counts per

minute were detected at the site.

Site Code: UPR-200-E-90 **Classification:** Accepted

UPR-200-E-90, UN-216-E-18, Ground **ReClassification: Site Names:**

> Contamination around B Plant Sand Filter, UN-216-E-90, Radioactive Spill Near 221-

B Building, UN-200-E-90

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

Site A 1991 site visit found the area around the 291-B Sand Filter delimited by a light weight chain

Description: link fence and marked with surface contamination warning signs.

Waste Type: Process Effluent

Waste In September 1980 the area surrounding the 291-B Stack sand filter (inoperable) and filtration **Description:**

system was found to have high gamma dose rates. Millions of curies of radionuclides filtered through these systems and is the source of the radiation according to BHI-00179. WHC-SP-

0098-7 indicates the contamination possibly spread from UPR-200-E-80.

Site Code: UPR-200-E-92 **Classification:** Rejected (Proposed)

ReClassification: Site Names: UPR-200-E-92, 216-E-20, UN-216-E-20,

UN-216-20, Ground Contamination

Outside 200 East Fence, UN-200-E-92, UN-

216-E-92

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1981

Site This site was released from radiation zone status after the contaminated soil was removed in

Description: 1981. It is no longer marked or posted.

Waste Type: Vegetation

Waste Small amounts of strontium and cesium were deposited into the sand from contaminated Russian

Description: thistle fragments.

Site Code: UPR-200-E-93 Classification: Rejected (Proposed)

Site Names: UPR-200-E-93, UN-216-E-21 Ground ReClassification:

contamination along 200 East Area fence

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1981

Site This unplanned release is no longer marked or posted.

Description:

Waste Type: Vegetation

Waste Small amounts of contamination were deposited into the sand from the contaminated Russian

Description: thistle that collected and then decomposed along the fence line.

Site Code: UPR-200-E-97 Classification: Accepted

Site Names: UPR-200-E-97, PUREX Railroad Tunnel ReClassification:

Contamination, UN-216-E-25, UN-200-E-

97

Site Type: Unplanned Release Start Date: 1980

Site Status: Inactive End Date:

Site The site is not separately marked or posted.

Description:

Waste Type: Soil

Waste Surface soil contamination was identified from an unknown source.

Description:

Site Code: UPR-200-E-98 Classification: Accepted

Site Names: UPR-200-E-98, UN-216-E-26, Ground ReClassification:

Contamination East of C Plant, UN-200-E-

98

Site Type:Unplanned ReleaseStart Date:1955Site Status:InactiveEnd Date:1965

Site The location of this site is currently within a large surface stabilized area known as 200-E-41.

Description: Much of the contamination was removed and placed into the 218-C-9 Burial Pit in 1992. The

area has been surface stabilized with powerhouse ash. The covered area has "Underground

Radioactive Material" warning signs posted.

Waste Type: Soil

Waste The release consisted of radioactive particulate matter from the Hot Semiworks operation that **Description:** was deposited onto the ground surface east of the facility. The contamination was primarily

strontium-90.

Site Code: UPR-200-E-101 Classification: Accepted

Site Names: UPR-200-E-101, UN-216-E-30, UN-216-E- ReClassification:

101, UN-200-E-101, Radioactive Spill

Near 242-B Evaporator

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date:

Site The site, adjacent to the B Tank Farm perimeter fence, is currently a posted as an Underground

Description: Radioactive Material area.

Waste Type: Soil

Waste The release consisted of an unknown amount of radioactive particulates from the 241-B Tank

Description: Farm.

Site Code: UPR-200-E-103 Classification: Accepted

Site Names: UPR-200-E-103, UN-200-E-103, BCS Line ReClassification:

Leak South of R-17 at 221-B

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site The release site is not marked or posted. The change house structure has been removed.

Description:

Waste Type: Process Effluent

Waste The release consisted of contaminated liquid from the BCS crib line, with radiation levels up to 1,500 counts per minute at the surface of the depression and 100,000 counts per minute inside

the excavation.

Site Code: UPR-200-E-112 Classification: Accepted

Site Names: UPR-200-E-112, UN-200-E-112, ReClassification:

Contaminated Railroad Track from B-Plant

to the Burial Ground

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

Site The contaminated section of track and the Atlantic Avenue crossing were cleaned by noon,

Description: February 12, 1979.

Wasta Type Droppes Effluent

waste type: Process Elliuent

Waste The release consisted of a spill of liquid from a cesium ion exchange column with beta/gamma

Description: readings up to 80,000 counts per minute. The equipment was being transported to the burial

ground on a railcar.

Site Code: UPR-200-E-114 Classification: Accepted

Site Names: UPR-200-E-114, 202-A Valve Pit, UN-200- ReClassification: Rejected (4/20/2000)

E-114

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The documented release describes a personnel contamination. The location where the employee

Description: became contaminated was not identified beyond "a valve pit outside 202-A."

Waste Type: Process Effluent

Waste Readings of 8,000 counts/minute beta and 1,000 counts/minute alpha were detected on an

Description: employee. Americium was detected in a lung count.

Site Code: UPR-200-E-140 Classification: Accepted

Site Names: UPR-200-E-140, PCB Oil Spill at 211-B ReClassification:

Bulk Chemical Storage Area, UN-200-E-

140

Site Type:Unplanned ReleaseStart Date:1986Site Status:InactiveEnd Date:1986

Site No warning signs or evidence of the unplanned release were observed during a 1991 site visit.

Description:

Waste Type: Chemicals

Waste The release consisted of oil contaminated with polychlorinated biphenyls (PCBs) at a

Description: concentration of 1 to 38 parts per million.

Site Code: UPR-200-E-141 Classification: Rejected (Proposed)

Site Names: UPR-200-E-141, 2718-E Building Uranyl

Nitrate Spill to Ground, UN-200-E-141

Site Type:Unplanned ReleaseStart Date:1984Site Status:InactiveEnd Date:1984

Site The site is a release of corrosive uranyl nitrate onto asphalt and soil that occurred at the 2718-E **Description:** Building. The site lies within a fenced area. The contaminated asphalt and soil were removed

ReClassification:

until only background levels remained.

Waste Type: Chemicals

Waste The release consisted of uranyl nitrate (corrosive), and 84% uranium-235 (source radioactive)

Description: from a 207 liter (55 gallon) drum being stored on an asphalt pad.

Site Code: Classification: Accepted UPR-200-E-142

UPR-200-E-142, 202-A Diesel Fuel Spill, **ReClassification: Site Names:**

UN-200-E-142

1986 **Site Type:** Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Site The release site is not physically marked.

Description:

Waste Type: Oil

Waste The release consisted of approximately 75.7 liters (20 gallons) of diesel fuel.

Description:

UPR-200-E-143 **Classification:** Accepted **Site Code:**

ReClassification: Site Names: UPR-200-E-143, Contamination Adjacent

to 244-A Lift Station, UN-216-E-43

Start Date: 1990 Site Type: Unplanned Release

Site Status: Inactive **End Date:**

Site This release is not separately marked or posted. Various radiological postings exist in this **Description:**

vicinity that are associated with the 244-A Lift Station and 241-C Tank Farm contamination

migration.

Waste Type: Animal Waste

Waste Contaminated rabbit feces and soil contamination were found in the area. Laboratory analysis of

Description: the feces found cesium-137 to be the most prevalent contaminant.

UPR-200-E-144 **Site Code:** Classification: Accepted

Site Names: UPR-200-E-144, Soil Contamination North **ReClassification:**

of 241-B, UN-216-E-44

Start Date: Site Type: Unplanned Release **Site Status:** Inactive **End Date:**

The site is a large area posted as Underground Radioactive Material. Site

Description:

Waste Type: Soil

The site consisted of several acres of particulate surface contamination to the north and east of Waste 241-B Tank Farm. The source is assumed to be activities in the 241-B and 241-BY Tank Farms. **Description:**

UPR-200-N-1 **Classification: Site Code:** Accepted

Site Names: UPR-200-N-1, Unplanned Release at the **ReClassification:**

212-R Railroad Spur

Site Type: Unplanned Release **Start Date:**

Inactive **End Date: Site Status:**

Site **Description:** The site is a portion of the railroad track extending south from the 212-R building. In 1992, it was delineated with light weight chain and posted with Surface Contamination signs. The portion of track that was posted as a radiation zone in 1992 measured 91 meters (300 feet) in length.

In November 2001 the original posted area was marked with "Contamination Area" signs and enclosed two locomotives. South of this posted area (the WIDS site) was a short break in the posted area, then the tracks were again posted with another "Contamination Area." Inside this area were five railroad cars enclosed by a chain link fence, the cars were posted as "Contamination Area and Radiation Area" and "High Radiation Area." Farther south, across the paved access road, other railroad cars on parts of the spur are posted with "Radiological Materials Area," "Contamination Area" and, inside another chain link fence, "High Radiation Area." The zones are temporary and reflect the railroad cars parked on the spur as they await recycling. The same group at Flour Hanford manages all the contamination zones on this spur, along with the part designated as UPR-200-N-1.

Waste Type: Equipment

Waste Contaminated rail cars are stored on this railroad spur.

Description:

UPR-200-N-2 Classification: **Site Code:** Accepted

Site Names: UPR-200-N-2, 200-N-2, Unplanned **ReClassification:**

Release near Well Pumphouse No. 2, Well

Pumphouse East of 212-R

Site Type: Unplanned Release **Start Date: Site Status:** Inactive **End Date:**

Site

Description:

The site is a 6.1 by 6.1-meter (20 by 20-foot) area surrounded by a lightweight chain barrier and "Underground Radioactive Material" warning signs. There are two open, wood lined holes with

valves inside the posted area. They measure approximately 1 meter square and are approximately

1 meter deep.

Site Code: UPR-200-W-3 **Classification:** Accepted

Site Names: UPR-200-W-3, Railroad Contamination, **ReClassification:**

UN-200-W-3

Site Type: Unplanned Release **Start Date:** 1949

End Date: Site Status: Inactive

The T-Plant Railroad Cut is a posted Contamination Area from the tunnel door westward to a Site

chain link gate. A 1.8 meter by 1.8 meter (6 foot by 6 foot) posted Contamination Area is located **Description:**

approximately 6 meters (20 feet) west of the T-Plant chain link fence that crosses the railroad cut

track and encloses the T-Plant facility.

Waste Type: Chemicals

Waste The release was undefined radioactive contamination.

Description:

Classification: Site Code: UPR-200-W-4 Accepted Site Names: UPR-200-W-4, Railroad Contamination, ReClassification:

UN-200-W-4

Site Type: Unplanned Release Start Date: 1949

Site Status: Inactive End Date:

Site The release is not physically marked or posted.

Description:

Waste Type: Soil

Waste Contamination specks were found along the RR track with readings averaging 7 millirem/hour.

Description:

Site Code: UPR-200-W-10 Classification: Accepted

Site Names: UPR-200-W-10, UN-200-W-10, ReClassification:

Contamination Spread at 203-S UNH Tanks

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site The site consisted of an area around the 203-S Uranium Nitrate Hexahydrate (UNH) tanks. The

Description: area has been decommissioned and surface stabilized. It is currently posted with Underground

Radioactive Material signs.

Waste Type: Soil

Waste The release was described as uranium contamination of the soil with a maximum reading of

Description: 10,000 counts per minute at 25 centimeters (1 inch).

Site Code: UPR-200-W-14 Classification: Accepted

Site Names: UPR-200-W-14, Waste Line Leak at 242-T ReClassification:

Evaporator, UN-200-W-14

Site Type:Unplanned ReleaseStart Date:1952Site Status:InactiveEnd Date:1952

Site The site is described as the surface above the waste line between the 242-T Evaporator and the **Description:** 207-T Retention Basin. The release site is not specifically marked or posted. However, severa

207-T Retention Basin. The release site is not specifically marked or posted. However, several areas of contamination were identified along the east side and northeast of the 241-TX/TY Tank Farm in 2000 and 2001 by the Dyncorp Integrated Soil, Vegetation and Animal Control group (see sitecode 200-W-78). The areas were stabilized with clean dirt and posted as Underground Radioactive Material. Since the exact location of this 1952 Unplanned Release is not

Additional to the characteristic of the control of

documented, it is possible one of the areas stabilized in 2001 is in the same location as the 1952

line leak. The mapping coordinates for the 1952 have been estimated from the limited

information provided.

Waste Type: Steam Condensate

Waste Cooling water and steam condensate from the 242-T waste evaporator that was routed to the 207-

Description: T retention basin through an underground cast iron pipeline. The contaminants were not

identified, but since 242-T was the source of the stream, the material probably has a similar

composition to the liquid discharged to the cribs.

Site Code: UPR-200-W-23 Classification: Accepted

Site Names: UPR-200-W-23, Waste Box Fire at 234-5Z, ReClassification:

UN-200-W-23

Site Type:Unplanned ReleaseStart Date:1953Site Status:InactiveEnd Date:1953

Site A 1999 facility walkdown could not locate this unplanned release site. The area is no longer

Description: marked or posted.

Waste Type: Ash

Waste Plutonium contamination up to 10,000 disintegrations was spread by a fire in a waste box in

Description: June 1953.

Site Code: UPR-200-W-39 Classification: Accepted

Site Names: UPR-200-W-39, UN-200-W-39, 224-U ReClassification:

Buried Contamination Trench

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

Site The release site is not marked because the 224-UA Building was built over the release location.

Description:

Waste Type: Process Effluent

Waste The release was described as a leak from 224-U. The effected soil was placed in a nearby trench. A later reference described the contamination as uranium, less than 10 nanocuries/gram.

No volume estimate is provided.

Site Code: UPR-200-W-41 Classification: Accepted

Site Names: UPR-200-W-41, Railroad Contamination, ReClassification:

UN-200-W-41, REDOX Railroad Cut

Contamination

Site Type: Unplanned Release Start Date: 1956

Site Status: Inactive End Date:

Site The railroad track from the 202-S Tunnel to the first gravel road intersection has been covered

Description: with clean backfill material. The berms on the sides of railroad cut have been pushed in and

posted as an "Underground Radioactive Material" area.

Waste Type: Chemicals

Waste The waste was contaminated with beta/gamma with readings to 1,000 millirads/hour.

Description:

Site Code: UPR-200-W-42 Classification: Accepted

Site Names: UPR-200-W-42, Contamination found at **ReClassification:**

2706-S, UN-200-W-42

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site This site is located within the UPR-200-W-41 surface stabilized area. In 1996, the 2706-S shack

Description: was still standing, but the release site was not separately marked or posted. The railroad track

adjacent to 202-S had been covered with clean dirt. The section of covered track from the fence to the first gravel road intersection is posted as an Underground Radioactive Material area.

Waste Type: Chemicals

Waste The floor of the shack was contaminated with beta/gamma with readings to 500 millirads/hour

Description: on the snow outside of the shack and beta/gamma with readings to 3,200 millirads/hour on the

papered floor inside the shack.

Site Code: UPR-200-W-43 Classification: Accepted

Site Names: UPR-200-W-43, Contaminated Blacktop **ReClassification:**

East of 233-S, UN-200-W-43

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site The site is no longer marked or posted. The 233-S building was demolished in 2003 and 2004.

Description:

Waste Type: Soil

Waste Alpha with readings up to 2,000 disintegrations per minute was found on the black top north of

Description: REDOX and east of 233-S.

Site Code: UPR-200-W-44 Classification: Accepted

Site Names: UPR-200-W-44, Railroad Track ReClassification:

Contamination, UN-200-W-44

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site In 1954, a burial box in transit to a decontamination facility fell to the ground while the train was

Description: in motion and lodged against a steam line support. The exact location is unknown.

Waste Type: Soil

Waste The release site is soil contaminated with beta/gamma with readings maximum readings up to 2

Description: rads/hour.

Site Code: UPR-200-W-46 Classification: Accepted

Site Names: UPR-200-W-46, Contaminated Railroad **ReClassification:**

Track, H-2 Centrifuge Burial, UN-200-W-

46

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date:

Site The railroad track from the 202-S Tunnel to the first gravel road intersection has been covered **Description:**

with clean backfill material. The railroad cut located inside the facility fence is posted as a

"Contamination Area." The section of covered track from the fence to the first gravel road

intersection is posted as an "Underground Radioactive Material" area.

Waste Type: Equipment

The waste was contaminated fumes emitting from a centrifuge, with beta/gamma readings up to Waste

Description: 1 rad/hour noted during burial. The centrifuge was ruthenium contaminated.

Site Code: UPR-200-W-48 Classification: Accepted

UPR-200-W-48, Contaminated Railroad **ReClassification: Site Names:**

Track near 221-U, UN-200-W-48

Start Date: 1958 **Site Type:** Unplanned Release

Site Status: Inactive **End Date:**

Site The area is no longer marked or posted.

Description:

Waste Type: Chemicals

The release site contained beta/gamma with readings to 9 rads/hour that spread while moving a Waste

Description: plastic wrapped, waste transfer jumper off a flat bed truck. It is not known what facility the

jumper came from.

Site Code: UPR-200-W-51 Classification: Accepted

Site Names: UPR-200-W-51, Release from 241-S **ReClassification:**

Diversion Box, UN-200-W-51, UPR-200-

W-52

Site Type: Unplanned Release **Start Date:** 1958

Inactive **Site Status: End Date:**

Site The release site is not currently marked or posted.

Description:

Waste Type: Process Effluent

Waste Beta/gamma particulates with readings up to 50 millirads/hour within 100 feet (30.48 meters) of **Description:**

the diversion box and readings on Tenth Street to about 4,000 counts/minute and 5,000 counts per minute outside the fence were documented. Beta/gamma readings of up to 1 rad/hour were

identified immediately around the 241-S-151 Diversion Box. Specific contaminants were not

identified.

Site Code: UPR-200-W-52 **Classification:** Accepted

Site Names: UPR-200-W-52, Release from 241-S ReClassification:

Diversion Box, UN-200-W-52

Site Type: Unplanned Release **Start Date:** 1958 **Site Status: End Date:** 1958 Inactive

Site The release site is not currently marked or posted.

Description:

Waste Type: Process Effluent

Waste Contaminated particulates from the diversion box contaminated a large area south of the tank

Description: farm.

Site Code: UPR-200-W-55 Classification: Accepted

Site Names: UPR-200-W-55, Uranium Powder Spill at **ReClassification:**

224-U, UN-200-W-55

Site Type: Unplanned Release Start Date: 1960

Site Status: Inactive End Date:

Site The site is no longer marked or posted.

Description:

Waste Type: Chemicals

Waste On April 12, 1960, 1.36 metric tons (1.5 tons) of uranium powder that had been separated from **Description:** fission products spilled on the ground. Most of the powder was picked up and drummed.

Site Code: UPR-200-W-56 Classification: Accepted

Site Names: UPR-200-W-56, Contamination at the **ReClassification:**

REDOX Column Carrier Trench, UN-200-

W-56

Site Type: Unplanned Release Start Date: 1961

Site Status: Inactive End Date:

Site The site is located inside the REDOX facility fence. It is not separately marked or posted.

Description:

Waste Type: Chemicals

Waste Beta/gamma contamination was measured at the site with readings at 30,000 counts/minute on

Description: the gravel and 80,000 counts/minute on the blacktop.

Site Code: UPR-200-W-57 Classification: Accepted

Site Names: UPR-200-W-57, UPR-200-E-120 ReClassification:

(misassignment of E-W area number), UN-

200-W-57

Site Type: Unplanned Release Start Date: 1963

Site Status: Inactive End Date:

Site The site is no longer marked or posted.

Description:

Waste Type: Ash

Waste Alpha radiation levels in plutonium-contaminated materials in the soot, ashes, and in the air

Description: greater than 5 million disintegrations per minute.

Site Code: UPR-200-W-58 Classification: Accepted

Site Names: UPR-200-W-58, Railroad Track ReClassification:

Contamination, UN-200-W-58

Site Type: Unplanned Release Start Date: 1965

Site Status: Inactive End Date:

Site The Unplanned Release is not separately marked or posted from other postings on the railroad

Description: track.

Waste Type: Chemicals

Waste The release consisted of beta/gamma contamination with levels ranging from 100,000

Description: counts/minute to a maximum of 5 rads/hour.

Site Code: UPR-200-W-60 Classification: Accepted

Site Names: UPR-200-W-60, Railroad Contamination, ReClassification:

UN-200-W-60

Site Type: Unplanned Release Start Date: 1966

Site Status: Inactive End Date:

Site The U Plant Railroad had been surrounded with soil berms on the north and south sides of the

Description: track and posted with Contamination Area signs. The area was surface stabilized in 2001. The stabilization included the UPR-200-W-60 area. The entire area, including the railroad tracks, is

now covered clean dirt and posted with Underground Radioactive Material Area signs.

Waste Type: Chemicals

Waste PUREX equipment was being transferred to U Plant in a rail car filled with water (for

Description: shielding). Beta/gamma contamination was found on the railroad tracks with readings ranging

from a few thousand counts per minute to a maximum of 1 rad/hour.

Site Code: UPR-200-W-61 Classification: Accepted

Site Names: UPR-200-W-61, REDOX Ground ReClassification:

Contamination, UN-200-W-61

Site Type: Unplanned Release Start Date: 1966

Site Status: Inactive End Date:

Site The area is not currently marked or posted.

Description:

Waste Type: Process Effluent

Waste Beta/gamma with readings from 4,000 to 100,000 counts/minute was measured at the site.

Description:

Site Code: UPR-200-W-65 Classification: Accepted

Site Names: UPR-200-W-65, Contamination in the T- **ReClassification:**

Plant Railroad Cut, UN-200-W-65

Site Type: Unplanned Release Start Date: 1969

Site Status: Inactive End Date:

Site The railroad cut is currently posted as a Contamination Area, extending from the tunnel door

Description: westward to a chain link gate and fence.

Waste Type: Chemicals

Waste Beta/gamma with readings from 5,000 counts/minute to 150 millirads/hour.

Description:

Site Code: UPR-200-W-67 Classification: Accepted

Site Names: UPR-200-W-67, Contamination near 2706- ReClassification:

T, UN-200-W-67

Site Type: Unplanned Release Start Date: 1970

Site Status: Inactive End Date:

Site The unplanned release site is no longer marked or posted.

Description:

Waste Type: Equipment

Waste Beta/gamma with readings of 20,000 counts/minute on the ground. The contaminated electric

Description: lift read as high as 500 millirads/hour.

Site Code: UPR-200-W-68 Classification: Accepted

Site Names: UPR-200-W-68, Road Contamination, UN- ReClassification:

200-W-68

Site Type: Unplanned Release Start Date: 1972

Site Status: Inactive End Date:

Site The release is not physically marked or posted.

Description:

Waste Type: Chemicals

Waste Beta/gamma contamination with readings from 5,000 to 80,000 counts/minute was found. Initial

Description: surveys revealed two spots to a maximum of 4.5 rads/hour at 5.1 centimeters (2 inches).

Assumed to be from tank farm equipment being transported to burial ground.

Site Code: UPR-200-W-69 Classification: Accepted

Site Names: UPR-200-W-69, Railroad Contamination, ReClassification:

UN-200-W-69

Site Type: Unplanned Release Start Date: 1973

Site Status: Inactive End Date:

Site The 204-S area has been surface stabilized. This Unplanned Release is not separately marked or

Description: posted.

Waste Type: Chemicals

Waste Beta/gamma contamination with readings from 2,000 to 50,000 counts/minute to 5,000

Description: millirads/hour were measured at the railroad gate and from 5,000 to 100,000 counts/minute were

measured outside the REDOX exclusion fence.

Site Code: UPR-200-W-71 **Classification:** Accepted

Site Names: UPR-200-W-71, UN-200-W-71, **ReClassification:**

Contamination Spread along 16th Street

Site Type: Unplanned Release **Start Date:** 1974

End Date: Site Status: Inactive

Site The site is no longer marked or posted.

Waste

Description:

Chemicals Waste Type: The release dripped residue from a contaminated heel-jet removed from the 241-U-102 Tank.

Description: Beta-gamma contamination up to 600 millirads/hour was found on the road.

Site Code: UPR-200-W-73 **Classification:** Accepted

Site Names: UPR-200-W-73, Contaminated Railroad **ReClassification:**

Track at 221-T, UN-200-W-73

1974 **Site Type:** Unplanned Release **Start Date:**

Inactive **End Date: Site Status:**

Site The railroad cut adjacent to the 221-T tunnel is currently posted as a Contamination Area. The

rail spur leading into the 2706-T facility is currently not posted. The Unplanned Release area is **Description:**

not specifically marked or posted.

Waste Type: Chemicals

Waste Spotty beta/gamma contamination with readings to 40 millirads/hour on the ground.

Description:

Site Code: UPR-200-W-74 Classification: Accepted

Site Names: UPR-200-W-74, Overground Line Leak at **ReClassification:**

241-Z, UN-200-W-74

Site Type: Unplanned Release **Start Date:** 1976 Inactive **End Date:** 1976 **Site Status:**

The site is a small area where flush solution from decontamination of a cooling waste effluent Site

header was being pumped. Alpha contamination was found and cleaned up. The area is no longer **Description:**

marked or posted.

Chemicals **Waste Type:**

Alpha contamination with maximum readings of 8,000 disintegrations/minute. Waste

Description:

Site Code: UPR-200-W-75 Classification: Accepted

Site Names: UPR-200-W-75, Contamination Spread at ReClassification:

241-Z, UN-200-W-75

Site Type: Unplanned Release Start Date: 1975

Site Status: Inactive End Date:

Site The site is not marked or posted. The contaminated soil was removed and the site can no longer

Description: be located. The release occurred inside a larger area related to a later unplanned release (UPR-200-W-79). At the time of the UPR-200-W-79 release (October 1978), the entire area was again

decontaminated.

Waste Type: Chemicals

Waste Beta/gamma with readings from 2,000 to over 40,000 disintegrations/minute direct and

Description: smearable to 20,000 disintegrations/minute.

Site Code: UPR-200-W-77 Classification: Rejected (Proposed)

Site Names: UPR-200-W-77, Contaminated Coyote **ReClassification:**

Feces, UN-200-W-77

Site Type: Unplanned Release Start Date: 1978

Site Status: Inactive End Date:

Site The site cannot be distinguished in the field; the coyote feces were immediately picked up and no

Description: remaining contamination was found at the site.

Waste Type: Animal Waste

Waste The waste contained plutonium-239, americium-241, cerium-144, europium-155, and strontium-

Description: 90 with beta/gamma readings to 40,000 counts/minute and alpha readings to 55,000

counts/minute.

Site Code: UPR-200-W-78 Classification: Accepted

Site Names: UPR-200-W-78, UO3 Powder Spill at 224- ReClassification:

U, UN-200-W-78

Site Type: Unplanned Release Start Date: 1970

Site Status: Inactive End Date:

Site The site is no longer marked or posted.

Description:

Waste Type: Chemicals

Waste Uranium trioxide powder was spilled on the ground. Contamination up to 20,000 counts per

Description: minute was found.

Site Code: UPR-200-W-83 Classification: Accepted

Site Names: UPR-200-W-83, Radioactive Spill Near ReClassification:

204-S Radiation Zone, UN-216-W-82, UN-

200-W-83

Site Type:Unplanned ReleaseStart Date:1981Site Status:InactiveEnd Date:1981

Site The release occurred at the 204-S Railroad Car Unloading Facility, which was decontaminated and decommissioned in December 1983. Immediately after the release, the site was secured,

stabilized, and decontamination was initiated. The release contaminated the step-off pad outside

the 204-S radiation zone at the 204-S Unloading Facility.

Waste Type: Chemicals

Waste The waste had an unknown amount of radioactive contamination.

Description:

Site Code: UPR-200-W-85 Classification: Accepted

Site Names: UPR-200-W-85, Radioactive Spill from **ReClassification:**

Multipurpose Transfer Box, UN-216-W-85,

UN-200-W-85

Site Type:Unplanned ReleaseStart Date:1982Site Status:InactiveEnd Date:1982

Site The site where UPR-200-W-85 occurred is a concrete pad west of the 2706-T building. A 1998

Description: site visit found a new equipment decontamination and waste handling building (2706-TA) has been built on this concrete pad. The concrete pad was sealed with an epoxy coating. The

building entry is posted as FCA-2706-002.

Waste Type: Process Effluent

Waste The waste had beta and gamma contamination with readings up to 100,000 counts per minute.

Description:

Site Code: UPR-200-W-86 Classification: Accepted

Site Names: UPR-200-W-86, Contaminated Pigeon ReClassification:

Feces at 221-U and 204-S, UN-200-W-86,

UN-216-W-86

Site Type:Unplanned ReleaseStart Date:1981Site Status:InactiveEnd Date:1981

Site No physical posting or markers currently identify this unplanned release.

Description:

Waste Type: Animal Waste

Waste Contamination consisted of pigeon feces containing cesium-134, cesium-137, strontium-90, and

Description: ruthenium-106, with readings from 10,000 disintegrations/minute beta/gamma to 40

millirad/hour.

Site Code: UPR-200-W-87 Classification: Accepted

Site Names: UPR-200-W-87, UN-216-W-87, ReClassification:

Radioactive Spill from Filter Housing, UN-

200-W-87

Unplanned Release **Start Date:** 1982 Site Type: **Site Status:** Inactive **End Date:** 1982

Site The release site is 2.7 square meters (30 square feet) of ground at the 219-S High Efficiency

Description: Particulate Air (HEPA) filter housing.

In January 2002, work began on installing a new concrete pad to support a replacement filter

housing.

Waste Type: Chemicals

Waste The waste had beta and gamma contamination with readings from 300 to 2,000 counts per

Description: minute.

Site Code: UPR-200-W-88 **Classification:** Rejected (Proposed)

UPR-200-W-88, Radioactive Spill from **ReClassification: Site Names:**

Uranyl Nitrate (UNH) Trailer, UN-216-W-

88, UN-200-W-88

Site Type: Unplanned Release 1984 **Start Date: End Date:** 1984 **Site Status:** Inactive

Site This release occurred on a roadway and was cleaned up right away. It was not marked or posted.

Description:

Waste Type: Chemicals

Waste The waste had beta and gamma contamination with readings from 300 to 650 counts per minute.

Description:

Site Code: UPR-200-W-89 **Classification:** Rejected (Proposed)

Site Names: UPR-200-W-89. Radioactive **ReClassification:**

> Contamination Southwest of 236-Z Building, UN-216-W-89, UN-200-W-89

Site Type: Unplanned Release **Start Date:** 1985 **Site Status:** Inactive **End Date:** 1985

The spill site was decontaminated and released by April 4, a few days after it occurred on March Site

Description: 29, 1985. The site was an area of asphalt outside the 236-Z Building. The release site is not

marked or posted.

Waste Type: Chemicals

The waste contained alpha contamination with readings up to 50,000 disintegrations per minute. Waste

Description:

UPR-200-W-90 **Classification:** Accepted **Site Code:**

UPR-200-W-90, Radioactive **ReClassification: Site Names:**

Contamination South of 236-Z Building,

UN-216-N-90, UN-200-W-90

Site Type: Unplanned Release Start Date: 1985

Site Status: Inactive End Date: 1985

Site Radioactive contamination was immediately removed to background levels. The release was to

Description: six personnel moving a box of contaminated pipes and affected an area of ground outside of the

236-Z Building. The area is not marked or posted.

Waste Type: Chemicals

Waste The waste contained alpha contamination with readings up to 10,000 disintegrations per minute.

Description:

Site Code: UPR-200-W-91 Classification: Accepted

Site Names: UPR-200-W-91, Radioactive **ReClassification:**

Contamination near 234-5Z Building, UN-

216-W-91, UN-200-W-91

Site Type:Unplanned ReleaseStart Date:1985Site Status:InactiveEnd Date:1985

Site UPR-200-W-91 contaminated an area of ground on the north side of the 234-5Z Building. The

Description: release site was covered with snow and ice, so it was contained with plastic and roped off until it

could be decontaminated. The final decontamination record could not be found.

Waste Type: Chemicals

Waste The waste contained alpha contamination with readings up to 20,000 disintegrations per minute.

Description:

Site Code: UPR-200-W-96 Classification: Accepted

Site Names: UPR-200-W-96, UN-216-W-4, 233-S ReClassification:

Floor Overflow, 233-SA Floor Overflow

Site Type: Unplanned Release Start Date: 1969

Site Status: Inactive End Date: 1969

Site The release consisted of the floor of the 233-SA Filter Exhaust Building, the concrete pad outside **Description:** the door of the filter exhaust building, the electric motor pad, and the ground surface outside the

233-SA filter exhaust building. The 233-S facility was demolished in 2003 and 2004. The release

site is not specifically marked or posted.

Waste Type: Process Effluent

Waste The release consisted of water from the filter house drain line that contained 0.1 grams (0.004 **Description:** ounces) of plutonium-239. Smear samples taken of the water and surfaces involved were as

ounces) of plutonium-239. Smear samples taken of the water and surfaces involved were as follows: 1) water on the floor of the 233-SA Filter Exhaust Building was greater than 40,000 disintegrations per minute; 2) smears of the concrete pad outside the door of the filter building

were 10,000 disintegrations per minute; 3) smears of the electric motor pad were 10,000 disintegrations per minute; and 4) water in the overflow pool was 600 disintegrations per minute.

Site Code: UPR-200-W-99 Classification: Accepted

Site Names: UPR-200-W-99, UN-216-W-7, 241-153- ReClassification:

TX Diversion Box Contamination Spread,

UN-200-W-99

Site Type:Unplanned ReleaseStart Date:1966Site Status:InactiveEnd Date:1966

Site The area on the east of Camden Avenue, east of the 241-TX Tank Farm was stabilized with soil

Description: and grass. It is marked with "Underground Radioactive Material" signs.

Waste Type: Process Effluent

Waste Airborne particulates containing approximately 1 curie of strontium-90, with maximum readings

Description: of up to 700 millirads/hour, contaminated a large area around the diversion box.

Site Code: UPR-200-W-101 Classification: Accepted

Site Names: UPR-200-W-101, UN-216-W-9, 221-U ReClassification:

Acid Spill R-1 through R-9, UN-200-W-101

Site Type: Unplanned Release Start Date: 1957

Site Status: Inactive End Date: 1957

Site The release site was posted with "Surface Contamination" warning signs. The contaminated ground was covered with sand and gravel. A larger contaminated area on the east side of 221-U

was surface stabilized in 1998 (UPR-200-W-162). This unplanned release area was located within the UPR-200-W-162 posted area. After being covered with clean material, he posting was changed to Underground Radioactive material. UPR-200-W-101 is not separately marked or

posted within the area.

Waste Type: Chemicals

Waste At the time of discharge, the reclaimed acid contained approximately one curie of strontium-90.

Description:

Site Code: UPR-200-W-116 Classification: Accepted

Site Names: UPR-200-W-116, UN-216-W-26, Ground ReClassification:

Contamination North of 202-S, UN-200-W-

116

Site Type: Unplanned Release Start Date: 1968

Site Status: Inactive End Date: 1981

Site The site has a light chain barricade and is posted with Underground Radioactive Material signs.

Description:

Waste Type: Chemicals

Waste The release contaminated 0.81 hectares (2 acres) of land with radioactive specks from the 204-S

Description: area.

Site Code: UPR-200-W-117 Classification: Accepted

Site Names: UPR-200-W-117, Railroad Track ReClassification:

Contamination, 221-U Railroad Cut

Contamination, UN-216-W-27, UN-200-W-

Site Type: Unplanned Release **Start Date: Site Status: End Date:** Inactive

Site **Description:** In November 2000, a posted Soil Contamination Area was located on the railroad spur leading into the 221-U railroad cut and tunnel. Most of the posted area is the railroad track on a bed of gravel. There is an unusual patch of asphalt across a portion of the railroad track, inside the posted Soil Contamination Area. In December 2001, the area was covered with clean backfill

material and downposted to an Underground Radioactive Material Area.

Waste Type: Chemicals

Waste The contamination was primarily fission products and uranium from chemical processing

Description: operations.

Site Code: UPR-200-W-118 **Classification:** Accepted

Site Names: UPR-200-W-118, Contamination at 211-U, **ReClassification:**

UN-216-W-28, UN-200-W-118

Unplanned Release **Start Date:** 1960 **Site Type: End Date:** 1972 **Site Status:** Inactive

Site The release site consisted of the ground outside the concrete unloading station at the 211-U Tank **Description:** Farm. The unplanned release site is no longer marked or posted. The area around the 211-U

tanks and railroad spur has been stabilized with gravel and is posted as an Underground

Radioactive Material area.

Waste Type: Chemicals

Waste The waste consisted of radioactive reclaimed nitric acid that spilled to the soil.

Description:

Site Code: UPR-200-W-123 **Classification:** Accepted

UPR-200-W-123, 204-S Unloading Facility **ReClassification: Site Names:**

Frozen Discharge Line, UN-200-W-123

Unplanned Release **Start Date:** 1979 Site Type:

Site Status: Inactive **End Date:** 1979

Site The 204-S Unloading Station was decontaminated and dismantled. The remnant of the 204-S

Basin lies underneath a layer of clean soil. The stabilized area is WIDS sitecode 200-W-22. This **Description:**

Unplanned Release is not separately marked or posted.

Waste Type: Chemicals

The release consisted of radioactive liquid waste from the 300 Area. Waste

Description:

Site Code: UPR-200-W-127 **Classification:** Accepted

UPR-200-W-127, Liquid Release from 242- ReClassification: Rejected (Consolidation) (6/13/ **Site Names:**

S Evaporator to the Ground, UN-200-W-

127

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The site was a pool of liquid that was covered with clean dirt located inside the tank farm fence, on the east side of the evaporator building. In June 2001, a gravel pile was noted near where the

release occurred, but the area is not specifically marked or separately posted.

Waste Type: Process Effluent

Waste The release was an unknown liquid associated with the 241-S Tank Farm.

Description:

The Site Was Consolidated With:

Site Code: 200-W-96

Site Names: 200-W-96, Contaminated Soil at 241-S/SX/SY Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: UPR-200-W-159 Classification: Accepted

Site Names: UPR-200-W-159, Caustic Spill at ReClassification:

Plutonium Finishing Plant, UN-200-W-159

Site Type:Unplanned ReleaseStart Date:1985Site Status:InactiveEnd Date:1985

Site The release site was the soil adjacent to the Plutonium Finishing Plant. The soil that was

Description: contaminated with sodium hydroxide was disposed of as hazardous waste. The site is not marked

or posted.

Waste Type: Chemicals

Waste The release consisted of an unknown amount of 50% aqueous sodium hydroxide.

Description:

Site Code: UPR-200-W-162 Classification: Accepted

Site Names: UPR-200-W-162, Contaminated Area on ReClassification:

East Side of 221-U, UN-216-W-37

Site Type: Unplanned Release Start Date: 1991

Site Status: Inactive End Date:

Site The site was posted with "Surface Contamination" warning signs. The area has been backfilled

Description: with clean material from the 200 Area Ash Pit. The radiological posting was changed to

"Underground Radioactive Material."

Waste Type: Chemicals

Waste The site consists of surface speck contamination.

Description:

Site Code: UPR-200-W-165 Classification: Accepted

Site Names: UPR-200-W-165, Contamination Area East ReClassification:

of 241-S, UN-216-W-30

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The originally posted area was scraped and the contaminated soil combined with other waste sites.

Description: The site had been a large area of posted Surface Contamination, located east of the 241-S Tank

Farm, north of the steam line. The 216-S-23 Crib and the 216-S-18 Excavation were inside the "Surface Contamination Area" posting. Some of the contaminated soil was placed on top of the 216-S-9 crib. Some was used to backfill the 216-S-18 depression. After collecting soil samples

of the scraped area, the site was removed from radiological control.

Waste Type: Chemicals

Waste The waste consisted of contamination specks that migrated from the 241-S, 241-SX, and 241-SY

Description: Tank Farms.

Site Code: UPR-200-W-166 Classification: Accepted

Site Names: UPR-200-W-166, Contamination Migration ReClassification:

from 241-T Tank Farm, UN-216-W-31

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was originally defined as a large, irregularly shaped area of surface soil contamination

Description: located north and east of the 241-T Tank Farm. The areas of soil contamination have been

scraped and consolidated onto the west slope of the 216-T-14 through 216-T-17 Trenches and also into the 207-T Retention Basin. The unplanned release is no longer separately marked or

posted.

Waste Type: Soil

Waste The waste consisted of spotty contamination which is suspected to have originated from the 241-

Description: T Tank Farm.

Site Code: UPR-600-12 Classification: Accepted

Site Names: UPR-600-12, UN-600-12, UNH Spill to ReClassification:

Route 4S

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

Site A small radiologically posted area (Underground Radiological Material Area) is located on the

Description: south shoulder of Route 4S, near the top of the hill, southeast of 200 East Area.

Waste Type: Chemicals

Waste The waste consisted of uranium nitrate hexahydrate solution spilled to the road and the soil. The

Description: soil was found to have less than 10 nanocuries/gram of contamination, and a maximum dose rate

at the surface of 60 millirads/hour.

Site Code: UPR-600-21 Classification: Rejected (Proposed)

Site Names: UPR-600-21, Contamination found ReClassification:

Northeast of 200 East Area, UN-216-E-31

Site Type:Unplanned ReleaseStart Date:1985Site Status:InactiveEnd Date:1991

Site The site had been a large radiologically posted area located northeast of 200 East Area. The area **Description:** is no longer marked or posted. The site was originally posted with "Radiological Controlled"

Area" warning signs. In 1990, the Health Physics group changed the posting to "Surface Contamination". All radiological postings were removed in 1991. The site was evaluated while being entered into WIDS in 1996 and proposed for rejection, since the contamination had been

removed for several years prior to that time.

200-ZP-2

Site Code: 232-Z Classification: Accepted

Site Names: 232-Z, 232-Z Waste Incineration Facility, **ReClassification:**

232-Z Incineration Facility, 232-Z

Incinerator

Site Type:Process Unit/PlantStart Date:1959Site Status:InactiveEnd Date:1976

Site The incinerator is a concrete block structure with a slightly sloped roof. The building is divided **Description:** into areas devoted to processing, storage, change rooms, chemical preparation, ventilation, and

utility distribution. The building has two stories at the north end and a single story over the

remaining portions.

Waste Type: Chemicals

Waste There is stabilized contamination on the building surfaces, including low levels of alpha

Description: contamination.

Site Code: 234-5Z HWSA Classification: Accepted

Site Names: 234-5Z HWSA, 234-5Z Hazardous Waste ReClassification: Rejected (9/14/2000)

Storage Area

Site Type: Storage Pad (<90 day) Start Date: 1985

Site Status: Active End Date:

Site The unit consists of a portable steel building, similar to a conex box, with no windows and three

Description: doors that open to three internal bays. The conex box is located on an asphalt pad.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The unit stores containerized hazardous waste. Examples of waste previously stored at the **Description:** facility include: halogenated solvents, thinners, paints, laboratory and process chemicals,

flammable liquids, polychlorinated biphenyls, and refrigerants.

200-ZP-3

Site Code: 213-W Classification: Accepted

Site Names: 213-W, 213-W Compactor Facility **ReClassification:**

Site Type: Process Unit/Plant Start Date: 1985

Site Status: Active End Date:

Site The 213-W is a pre-engineered, self-framing structure originally designed as the Dry Waste **Description:** Compactor Facility. The building contains three rooms: an entry room, a package inspection

room, and the computer room. The entry room opens into the compactor room through an airlock. Vehicle doors open from the compactor room to the inspection room, and from the

inspection room to the building exterior.

Waste Type: Equipment

Waste The unit was used to compact low-level dry waste and occasion repairs of contaminated

Description: instruments. Residual contamination on the equipment is expected.

Site Code: 213-W-1 Classification: Accepted

Site Names: 213-W-1, 213-W-TK-1, 213-W Compactor ReClassification:

Facility Retention Tank

Site Type:Storage TankStart Date:1985Site Status:InactiveEnd Date:1995

Site The 213-W-TK-1 Retention Tank is a below grade steel tank, plumbed to the 213-W HVAC

Description: System, the 272-WA Service Garages, and the 213-W Compactor Room.

Waste Type: Water

Waste Description:

The unit was used to collect drainage water from 272-WA service garages, drainage from the compactor room floor, and condensate from the high-efficiency particulate air filter system. The unit had the possibility of containing radioactive wastes in the event that they were introduced into the process. The water was analyzed periodically for radioactive materials. After analysis,

the water was released if no radioactive materials were present. The IMUST Checklist and Photo report, issued in April 1998, states the tank contains non-radioactive water.

Site Code: RMWSF Classification: Accepted

Site Names: RMWSF, Radioactive Mixed Waste **ReClassification:**

Storage Facility, Hanford Central Waste Complex, 2401W, 2402W, 2402WB, 2402WC, 2402WD, 2402WE, 2402WF, 2402WG, 2402WH, 2402WI, 2402WJ, 2402WK, 2402WL, 2403WA, 2403WB, 2403WC, 2403WD, 2404WA, 2404WB,

2404WC

Site Type: Storage Start Date: 1988

Site Status: Active End Date:

Site The Radioactive Mixed Waste Storage Facility consists of the 2401-W Storage Building, 23 low-

flash-point mixed waste storage modules, the twelve 2402-W series storage buildings, a mixed waste storage pad, the 2403-W mixed waste storage buildings, and the waste receiving and staging area. The 2401-W, 2402-W, and 2403-W Storage Buildings are preengineered steel

structures.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The unit receives and stores designated mixed waste.

Description:

Description:

Site Code: WRAP Classification: Accepted

Site Names: WRAP, Waste Receiving and Processing ReClassification:

Facility

Site Type:Process Unit/PlantStart Date:Site Status:ActiveEnd Date:

Site This site is operational. WRAP Module 1 is a large metal frame structure. The module has facilities necessary to handle, treat, and store a wide variety of wastes. Module 2A is planned to

facilities necessary to handle, treat, and store a wide variety of wastes. Module 2A is planned to be a metal structure designed to receive and ship low-level waste to the enhanced Radioactive and

Mixed Waste Storage Facility. Module 2B is still in development.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The unit consists of a storage and treatment facility for transuranic, low-level, low-level/mixed,

Description: and nonradioactive dangerous waste.

300-FF-1

Site Code: 300 ASH PITS Classification: Accepted

Site Names: 300 ASH PITS, 300 Ash Pits, 300 Area ReClassification: Closed Out (12/17/1997)

Ash Pits

Site Type:Coal Ash PitStart Date:1944Site Status:InactiveEnd Date:1994

Site The unit consists of two separate excavations that are 4.6 to 6.1 meters (15 to 20 feet) deep and

Description: 7,400 square meters (80,000 square feet) in area.

Waste Type: Ash

Waste Coal fly ash was periodically sluiced from the 384 Powerhouse to the pits with water at the rate **Description:** of 57 million liters/year (15 million gallons/year). Analysis of the fly ash according to 173-303

WAC indicated it was non-Extraction Procedure toxic. Filter backwash water was diverted to the east ash pit from 1992 to June 1995 to allow for the construction of a liner in the filter

backwash pond and resolve permitting is

Site Code: 300 FBP Classification: Accepted

Site Names: 300 FBP, 300 Area Filter Backwash Pond ReClassification: No Action (11/7/2000)

Site Type:Surface ImpoundmentStart Date:1987Site Status:InactiveEnd Date:1998

Site This site has been reclassified as "no Action."

Description:

The unit consists of two subsites; one is a single, rubber lined basin measuring 97.5 meters (320 feet) by 65 meters (213 feet, 7.6 meters (25 feet) deep. From 1987 to 1992, the basin operated as an unlined percolation pond, which is the second subsite. In 1992, the basin was lined with a

synthetic liner on a concrete foundation.

Waste Type: Water

Waste The unit receives 76 million liters/year (20 million gallons/year) of water and alum backwashed

Description: from filters. Analysis of the backwash has shown it to be nonhazardous.

SubSites:

SubSite Code: 300 FBP:1

SubSite Name: 300 FBP:1, 300 FBP (Unlined)

Classification: Accepted ReClassification: No Action

Description: The subsite represents the unlined pond that operated from 1987 to 1992. This component of

the 300 FBP is included as a "no action" site within the 300-FF-1/300-FF-5 Record of

Decision.

SubSite Code: 300 FBP:2

SubSite Name: 300 FBP:2, 300 FBP (Lined)

Classification: Accepted ReClassification: No Action

Description: This subsite is the lined filter backwash pond. This site is not addressed within the 300-FF-

1/300-FF-5 Record of Decision.

Site Code: 300 RFBP Classification: Accepted

Site Names: 300 RFBP, 300 Area Retired Filter ReClassification: Closed Out (7/23/2003)

Backwash Pond, Pond 5, East Bay of South

Process Pond

Site Type:PondStart Date:1975Site Status:InactiveEnd Date:1987

Site The site has been remediated and closed out.

Description:

When the South Process Pond became inactive in 1975, the east lobe started to be used by the 300

Area Water Treatment Facility as a filter backwash pond.

Waste Type: Process Effluent

Waste The unit received 3.8E+07 to 7.6E+07 liters/year (1E+07 to 2E+07 gallons/year) of water and **Description:** nonhazardous alum from backwashing filters. Analysis of the backwash has shown it to be

nonhazardous.

Site Code: 300-3 Classification: Accepted

Site Names: 300-3, 300-FF-1 Aluminum Hydroxide ReClassification: No Action (7/9/1997)

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site NE 1/4 of NW 1/4 of Section 11, T10N, R28E. The site is a wooden structure consisting of

Description: several horizontal 1 to 1.5 ft (0.30 to 0.46 m) diameter cedar logs forming a vertical wall

approximately $10 \, \text{ft} \, (3.0 \, \text{m})$ high running in a north/south direction. The top part of the wall slopes downward to the west and the bottom part is vertical. The structure appears to be resting

on a concrete slab at a depth of 10 to 15 ft (3.0 to 4.6 m).

Waste Type: Chemicals

Waste Sample analysis of the white, chalky material was consistent with aluminum hydroxide, or **Description:** hydrous aluminum oxide, but the uranium levels were very small. Uranium content for one

hydrous aluminum oxide, but the uranium levels were very small. Uranium content for one sample was 58 picocuries/gram and another was 30 picocuries/gram. Uranium concentrations in

pond scrapings are usually higher.

Site Code: 300-44 Classification: Accepted

Site Names: 300-44, R-32, UPR-300-FF-1, UN-300-FF- ReClassification: Closed Out (12/17/1997)

1

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site This site is southwest of 618-4 Burial ground, and has been remediated and closed out.

Description:

Waste Type: Soil

Waste Th

The soil contamination appears to be the result of shallow buried materials.

Description:

Site Code: 300-49 Classification: Accepted

Site Names: 300-49, Landfill 1a, UPR-300-FF-1, UN-ReClassification: Closed Out (5/28/2003)

300-FF-1

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site was a large rectangular area with visible debris on the surface and areas of subsidence.

After excavation and closure activities the area will be re- graded.

Waste Type: Misc. Trash and Debris

Waste Material visible on the surface included empty acid and mercury bottles, ceramics, and other glassware that appeared to be of laboratory origin, metal, and a partially buried 208-liter (55-

gallon) drum. Materials that are radiologically contaminated include soil, tumbleweeds, pipes, ceramics, glass, and a small amount of yellow material that resembles "yellow cake" (a complex

uranium compound, the product of chemically refining natural uranium).

Site Code: 300-50 Classification: Accepted

Site Names: 300-50, Landfill 1b, UPR-300-FF-1, UN-ReClassification: Closed Out (5/29/2003)

300-FF-1

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

The site was an area of surface disturbance. After excavation and closure activities were

completed the area was included in the 2004, 300-FF-1 Regrading Plan.

Waste Type: Misc. Trash and Debris

Waste A large number of discrete objects were detected by ground penetrating radar.

Description:

Site Code: 300-51 Classification: Accepted

Site Names: 300-51, Landfill 1c, UPR-300-FF-1, UN-ReClassification: No Action (7/9/1997)

300-FF-1

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The debris has been removed. The site is no longer marked or posted.

Description:

Waste Type: Misc. Trash and Debris

Waste

The site contained radiologically contaminated surface debris.

Description:

Site Code: 300-52 Classification: Accepted

Site Names: 300-52, 300 Area Sanitary Trenches ReClassification: No Action (7/9/1997)

Site Type:TrenchStart Date:1948Site Status:InactiveEnd Date:1996

Site The 300 Area Sanitary Trenches site includes two septic tanks and unlined trenches that were

Description: connected to the 300 Area Sanitary Sewer System.

Waste Type: Sanitary Sewage

Waste The trenches received sanitary waste from 300 Area facilities.

Description:

Waste Type: Chemicals

Waste Description:

Prior to 1985, discharges from the 3713 Sign Shop included an estimated 1 gallon (3.8 liters) per week of miscellaneous photochemicals used in the process. The trench has also received trace nonhazardous concentrations of carry over fixers, developers, inks, thinners, and solvents from

sign developing operations and silkscreen cleaning.

Site Code: 316-1 Classification: Accepted

Site Names: 316-1, South (old) Pond, 300 Area South ReClassification: Closed Out (7/23/2003)

Process Pond

Site Type:PondStart Date:1943Site Status:InactiveEnd Date:1975

Site The site has been remediated and closed out.

Description:

The site is no longer marked or posted. The pond was a 32,000 square meter (8-acre), unlined infiltration pond containing five separate pond sections. Ponds 1, 2, and 3 were separated by two 9.1-meter (30-foot) dikes. Pond 4, the largest pond, was separated from Ponds 1, 2, and 3 to the west by a 4.9-meter (16-foot) dike and from Pond 5 to the east by 3.1 meters (100 feet) of land. The dikes were bulldozed into three sections, and the fill was used to cover loose material.

Waste Type: Process Effluent

Waste Description:

The site originally received cooling water and low-level liquid wastes from the fuel fabrication facilities and early laboratories (313, 314, 3706 and 321 Buildings). Contaminants from these facilities included uranium, copper cobalt and small amounts of plutonium. Later, laboratory facility wastes went first to the 307 Retention Basins. Waste above discharge limits was diverted to holding tanks for disposal in the 200 Areas. The process ponds received waste via the 307 Retention Basins from 1963 to 1975.

Due to remedial activities, the uranium inventory at this site has been reduced. According to Mike Schwab (2000), an estimated 40,000 kilograms of uranium contained in soil was scraped

from the pond and transported to the Environmental Restoration Disposal Facility (ERDF), near 200 West Area.

Site Code: 316-2 Classification: Accepted

Site Names: 316-2, North (new) Pond, 300 Area North ReClassification: Closed Out (8/24/1999)

Process Pond

Site Type:PondStart Date:1948Site Status:InactiveEnd Date:1974

Site This site consisted of seven separate sections separated by 3.7-meter (12-foot) wide dikes, with

Description: the entire 40,000-square meter (10-acre) area surrounded by a dike 4.6 meters (15 feet) wide and

approximately 3.0 meters (10 feet) high.

The site has been remediated and closed out. The radiological posted was removed. The pond is

no longer marked or posted.

Waste Type: Process Effluent

Waste The site originally received cooling water and low-level liquid process wastes from the fuel fabrication facilities and the early laboratories (313, 314, 3706 and 321 Buildings). Later,

laboratory facility wastes went first to the 307 Retention Basins. Waste above discharge limits was diverted to holding tanks for disposal in the 200 Areas. The process ponds received

laboratory waste via the 307 Retention Basins from 1963 to 1975.

Due to remedial activities, the uranium inventory at this site has been removed. According to Mike Schwab (2000), an estimated 30,000 kilograms of uranium contained in soil was scraped from the pond and transported to the Environmental Restoration Disposal Facility (ERDF), near

200 West Area.

Site Code: 316-5 Classification: Accepted

Site Names: 316-5, 3904 Process Waste Trenches, 300 ReClassification: Closed Out (8/13/1998)

Area Process Trenches, 300 APT

Site Type:TrenchStart Date:1975Site Status:InactiveEnd Date:1994

Site The site has been remediated and is no longer marked or posted.

Description:

The site consisted of two trenches running north-south, 18 meters (60 feet) apart (between centerlines). Each trench was 468 meters (1,535 feet) long, 3.0 meters (10 feet) wide and 3.7 meters (12 feet) deep, with a side slope of 1:1.5. Separating the trenches is an earth dike, 15

meters (50 feet) wide at the bottom (top width varies) and 3.7 meters (12 feet) high.

The site was partly remediated through an expedited response action (ERA) in 1991.

Remediation was completed in 1997 and the site was clean closed through RCRA and closed out

under CERCLA regulations.

Waste Type: Process Effluent

Waste This unit served as the discharge site for the 300 Area Process Sewer system. The site received

Description: approximately 9.8E+06 liters (2.6E+06 gallons) of water per day. This water was chlorinated by

the water filter plant for the 300 Area and contained minerals added to the water during use. Water discharged to the process sewer is used primarily for cooling purposes and is not modified. Other sources of discharge include steam condensates, janitorial solutions from washing and waxing floors, water treatment (primarily salt), laboratories, process water from fuel fabrication and other aqueous solutions not designated as dangerous wastes by WAC-173-303. The annual waste quantity is 4.5E+08 kilograms (1E+09 pounds) per year and reflects the total flow to the unit, not a volume of dangerous waste discharged to the unit. No dangerous wastes have been discharged to the unit since November 1985. All discharge to the trenches was discontinued on December 29, 1995. Discharges after that date are sent to the 300 Area Treated Effluent Disposal Facility.

Site Code: 332 SF Classification: Accepted

332 SF, 332 Storage Facility, 332 **ReClassification:** Closed Out (4/21/1997) **Site Names:**

> Hazardous Waste Storage Area, 332 Interim Holding Facility. 332 Packaging

Test Facility

Site Type: Storage **Start Date:** 1984 1997 **Site Status:** Inactive **End Date:**

Site **Description:** The 332 Storage Facility was constructed as a less than 90 day storage facility. The building is a prefabricated, insulated metal structure erected on concrete footings. It is outfitted with explosion proof lighting, heating, and electrical outlets, as required for Uniform Building Code class H buildings, to permit the unrestricted storage of flammable and explosive materials. The floor is sloped toward an exterior wall sump fitted with a sump pump. Fireproof storage cabinets, a hood, and shelving were installed for dangerous waste storage. The building also includes a heater, fire alarm system, and alarm transmitter. The structure's outer dimensions are 6.1 meters (20 feet) by 6.1 meters (20 feet). A concrete slab extends 4.6 meters (15 feet) from the west side of the building. The slab is edged with a 15 centimeter (6 inch) curb to provide secondary containment and is surrounded by a 1.8 meter (6 foot) fence to prevent unauthorized access. The facility's storage design capacity was less than 6,800 liters (1,800 gallons) of material.

Waste Type: Chemicals

The facility was used for the temporary storage (<90 day) of flammable and explosive materials. Waste

Description:

618-4 Site Code: **Classification:** Accepted

618-4, Burial Ground No. 4, 318-4 **ReClassification: Site Names:**

Site Type: Burial Ground Start Date: 1955 **Site Status:** Inactive **End Date:** 1961

The waste unit is a single pit measuring 32 meters (105 feet) by 160 meters (525 feet). The waste Site

pit is enclosed by a fence measuring 179 meters (586 feet) by 67 meters (200 feet) by 167 meters **Description:**

(547 feet) by 68 meters (224 feet).

Waste Type: Misc. Trash and Debris

Waste The site contains an unknown quantity of uranium-contaminated miscellaneous materials. **Description:**

> During remedial activities, drums of depleted uranium packed in oil were uncovered. The presence of these drums was not previously known, therefore, the documented uranium

inventory for this burial ground did not include these (estimated to be up to 1500) barrels of depleted uranium. The inventory contained in the drums has been estimated to be 110,600 kilograms (243,800 pounds) (Schwab 2000).

Waste Type: Barrels/Drums/Buckets/Cans

Waste In 1998, drums of unknown material were uncovered during remedial action activities. It is

Description: suspected the drums contain depleted uranium filings and mineral oil

Site Code: 618-12 Classification: Accepted

Site Names: 618-12, North Process Pond Scraping ReClassification: Closed Out (8/29/1999)

Disposal Area

Site Type:Burial GroundStart Date:1949Site Status:InactiveEnd Date:1964

Site The pond had been backfilled with ashes. The backfilled area measured approximately 248 by

Description: 141 meters (814 by 462 feet).

The site was closed out in conjunction with the North Process Ponds in 1999. Contaminated

material was excavated and transported to ERDF. The site is not marked or posted.

Waste Type: Soil

Waste This site was used for disposal of uranium-contaminated soil that was scraped from the 316-2

Description: Pond (North Process Pond) and some uranium-contaminated soil that was removed from beneath

the 321 Building during excavation for hydraulic core mockup.

Site Code: 628-4 Classification: Accepted

Site Names: 628-4, Landfill 1D ReClassification: Closed Out (7/1/2003)

Site Type:Burn PitStart Date:1962Site Status:InactiveEnd Date:1974

Site The site has been remediated and closed out.

Description:

Waste Type: Misc. Trash and Debris

Waste The unit was used mainly for burning paper, wood, paint cans, and other operations debris;

Description: however, some incidental radioactive materials may have also been burned.

Site Code: UPR-300-FF-1 Classification: Accepted

Site Names: UPR-300-FF-1, 300-FF-1 Hot Spots, ReClassification: Closed Out (7/23/2003)

Surface Radiation Survey for 300-FF-1,

UN-300-FF-1,

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site has been remediated and closed out.

Description:

Waste Type: Soil

Waste Description:

Primarily, contamination was associated with the soil; however, some contaminated metal and other materials were also found. GM/P-11 instrument readings range from 100 to 50,000

counts/minute. Analysis of samples showed that the radiation levels were caused primarily by the presence of uranium. Some soil samples also contained relatively high concentrations of

copper.

Site Code: UPR-300-8 Classification: Accepted

Site Names: UPR-300-8, Caustic Spill from 311 Tank ReClassification: Closed Out (5/14/1998)

Farm to Process Sewer

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site This release was confined to the 300 Area Process Trench.

Description:

Waste Type: Chemicals

Waste The release consisted of 50% sodium hydroxide solution. The pH in the process sewer was

Description: 11.95.

Site Code: UPR-300-9 Classification: Accepted

Site Names: UPR-300-9, Nitric Acid Leak from 306-W ReClassification: Closed Out (5/14/1998)

to the Process Sewer

Site Type:Unplanned ReleaseStart Date:1976Site Status:InactiveEnd Date:1976

Site This release originated in Room 120 of the 306-W Building and drained into the 300 Area

Description: process drainage system.

Waste Type: Chemicals

Waste The release consisted of nitric acid solution containing 267.9 pounds (121.5 kilograms) of

Description: depleted uranium.

Site Code: UPR-300-15 Classification: Accepted

Site Names: UPR-300-15, Uranium Bearing Acid ReClassification: Closed Out (5/14/1998)

Release from 313 to the Process Sewer

Site Type: Unplanned Release Start Date: 1980
Site Status: Inactive End Date: 1980

Site The site was a release that flowed into the 313 Process Sewer leading to the 316-5 Trench.

Description:

Waste Type: Process Effluent

Waste **Description:** The waste contained uranium-bearing acid.

Site Code: UPR-300-19 **Classification:** Accepted

Site Names:

UPR-300-19, Chemical Release to the

ReClassification: Closed Out (5/14/1998)

Process Sewer

Site Type: Unplanned Release

1980 **Start Date:**

Site Status: Inactive **End Date:** 1980

Site

The release originated at the 313 Building floor trenches and was confined to the 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste

The waste contained nitric, sulfuric and chromic acid, followed by an ammonium bifluoride and

sodium hydroxide discharge with incoming acid used in copper component deoxidizing. **Description:**

Site Code: UPR-300-20 **Classification:** Accepted

Site Names: UPR-300-20, Acid Release to the Process

ReClassification: Closed Out (5/14/1998)

Sewer

Site Type:

1980 Unplanned Release **Start Date:**

Inactive **Site Status:**

End Date:

The release originated at the 313 Building Uranium Recovery Area and confined to the 300 Area

Process Trenches. **Description:**

Waste Type: Chemicals

Nitric and sulfuric acids with uranium in solution, quantity unknown.

Description:

Waste

Site

Site Code: UPR-300-21 **Classification:** Accepted

Site Names:

UPR-300-21, Nitric Acid Release to the

ReClassification: Closed Out (5/14/1998)

Process Sewer

Site Type: Unplanned Release

1980 **Start Date:**

Site Status: Inactive

End Date: 1980

Site

The release originated in the 333 Building and was confined to the 300 Area Process Trench.

Description:

Waste Type: Chemicals

Waste

The waste contained a small quantity of nitric acid.

Description:

Site Code: UPR-300-22 **Classification:** Accepted

Site Names:

UPR-300-22, Acid Release to the Process

ReClassification: Closed Out (5/14/1998)

Sewer

Site Type: Unplanned Release **Start Date:** 1980 Site Status: Inactive End Date: 1980

Site The release site originated in the 333 Building and was confined to the 300 Area Process Trench.

Description:

Waste Type: Chemicals

Waste The waste

Description:

The waste consisted of a small quantity of etch acids (nitric and hydrofluoric acids).

Site Code: UPR-300-23 Classification: Accepted

Site Names: UPR-300-23, Acid Release to the Process ReClassification: Closed Out (5/14/1998)

Sewer

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The release site was confined to the 300 Area Process Trench and originated at the 333 Building.

Description:

Waste Type: Chemicals

Waste The waste consisted of a small quantity of incoming etch acids (nitric and sulfuric acid).

Description:

Site Code: UPR-300-24 Classification: Accepted

Site Names: UPR-300-24, Acid Release to the Process ReClassification: Closed Out (5/14/1998)

Sewer

Site Type: Unplanned Release Start Date: 1980

Site Status: Inactive End Date: 1980

Site The release originated at the 333 Building Waste Acid System and was confined to the 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste The waste consisted of a small quantity of waste etch acids (nitric and hydrofluoric acid).

Description:

Site Code: UPR-300-25 Classification: Accepted

Site Names: UPR-300-25, Release to the Process Sewer ReClassification: Closed Out (5/14/1998)

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The release originated at the 333 Building Uranium Mill Tank and was confined to the 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste The waste consisted of a small quantity of uranium etch acids (nitric and sulfuric acid) in

Description: uranium solution.

Site Code: UPR-300-26 Classification: Accepted

Site Names: UPR-300-26, Caustic Release to the **ReClassification:** Closed Out (5/14/1998)

Process Sewer

Site Type:Unplanned ReleaseStart Date:1980Site Status:InactiveEnd Date:1980

Site The release originated in the 311 Tank Farm and was confined to the 300 Area Process Trench.

Description:

Waste Type: Chemicals

Waste The waste consisted of a very small quantity of 50% sodium hydroxide consisting of less than

Description: 0.1 pound (0.05 kilograms) of sodium hydroxide.

Site Code: UPR-300-27 Classification: Accepted

Site Names: UPR-300-27, Acid Release to the Process ReClassification: Closed Out (5/14/1998)

Sewer

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

Site The release originated in the Uranium Bearing Acid Storage Tank in the 333 Building and was

Description: confined to the 300 Area Process Trench.

Waste Type: Chemicals

Waste The waste contained an unknown quantity of uranium-bearing acid waste consisting of nitric and

Description: sulfuric acids.

Site Code: UPR-300-28 Classification: Accepted

Site Names: UPR-300-28, Release to the Process Sewer ReClassification: Closed Out (5/14/1998)

Site Type:Unplanned ReleaseStart Date:1978Site Status:InactiveEnd Date:1978

Site The release was an overflow to the 334A Containment Pit. The UPR was routed to the 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste The release consisted of solution containing hydrofluoric, nitric, and sulfuric acids with copper,

Description: uranium, and zirconium in solution.

Site Code: UPR-300-29 Classification: Accepted

Site Names: UPR-300-29, Release to the Process Sewer **ReClassification:** Closed Out (5/14/1998)

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site This site originated in the Waste Acid System in the 333 Building and was routed to the 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of waste etch acids containing hydrofluoric, nitric,

Description: sulfuric, and chromic acids with copper, uranium, and zirconium in solution.

Site Code: UPR-300-30 Classification: Accepted

Site Names: UPR-300-30, Acid Release to the Process ReClassification: Closed Out (5/14/1998)

Sewer

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site The release originated at the Waste Acid System in the 333 Building and was routed to 300 Area

Description: Process Trench.

Waste Type: Chemicals

Waste The waste consisted of a small quantity of waste etch acids and spent film chemicals containing

Description: hydrofluoric, nitric, sulfuric, and chromic acids.

Site Code: UPR-300-32 Classification: Accepted

Site Names: UPR-300-32, Acid Leaks at the 333 **ReClassification:** Closed Out (7/23/2003)

Building

Site Type:Unplanned ReleaseStart Date:1974Site Status:InactiveEnd Date:1974

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of uranium etch acids containing nitric and sulfuric

Description: acid with uranium in solution.

Site Code: UPR-300-33 Classification: Accepted

Site Names: UPR-300-33, Waste Leak at the 333 ReClassification: Closed Out (7/23/2003)

Building

Site Type:Unplanned ReleaseStart Date:1974Site Status:InactiveEnd Date:1974

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of waste etch acids containing hydrofluoric, nitric,

Description: and chromic acids with copper, uranium, and zirconium in solution.

Site Code: UPR-300-34 Classification: Accepted

Site Names: UPR-300-34, Release to the Process Pond ReClassification: Closed Out (7/23/2003)

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1975

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste An unknown quantity of waste etch acids were discharged to the soil. The waste etch acids **Description:** contained hydrofluoric, nitric, and chromic acids with copper, uranium, and zirconium in

solution.

Site Code: UPR-300-35 Classification: Accepted

Site Names: UPR-300-35, Leak at the 333 Building **ReClassification:** Closed Out (7/23/2003)

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of uranium-bearing etch acids containing nitric and

Description: sulfuric acids with uranium in solution.

Site Code: UPR-300-36 Classification: Accepted

Site Names: UPR-300-36, Acid Leak at the 333 Building ReClassification: Closed Out (7/23/2003)

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of waste etch acids containing hydrofluoric, nitric,

Description: and chromic acids with copper, uranium, and zirconium in solution.

Site Code: UPR-300-37 Classification: Accepted

Site Names: UPR-300-37, 333 Building Leaks ReClassification: Closed Out (7/23/2003)

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site The site has been remediated and closed out.

Description:

Waste Type: Chemicals

Waste The waste consisted of an unknown quantity of waste etch acids containing hydrofluoric, nitric

and chromic acids with copper, uranium, and zirconium in solution. **Description:**

Site Code: UPR-300-47 Classification: Accepted

UPR-300-47, 309 Building, Ethylene **Site Names: ReClassification:** Closed Out (5/14/1998)

Glycol Release, Glycol Spill from the 309,

Chiller System

Inactive

Site Type: Unplanned Release **Start Date:** 1993 **End Date:**

Site The release site was the sump in the machinery room at the 309 Building. The release site was

Description: cleaned up and waste generated during the cleanup was disposed of properly on May 7, 1993.

Waste Type: Chemicals

Waste The waste consisted of 38 percent ethylene glycol solution.

Description:

Site Status:

Site Code: UPR-600-15 **Classification:** Accepted

Site Names: UPR-600-15, UN-600-15, Contaminated **ReClassification:**

Material found at 618-4

1979 **Site Type:** Unplanned Release **Start Date:** 1979 **Site Status:** Inactive **End Date:**

Site The area is posted as "Underground Radioactive Materials". The release site was an area of soil

outside the entrance to the 618-4 Burial Ground. The new fence was built in 1974; however, it **Description:**

was installed in a new location which left the release site outside of the burial ground boundaries.

1993

The previous fenced area included the release site.

Chemicals Waste Type:

The contamination came from buried fuel elements containing 0.15 percent uranium-235. A Waste

Description: dose rate of 4,000 millirads/hour was detected on the soil surface.

300-FF-2

300 IFBD Site Code: Classification: Accepted

Site Names: 300 IFBD, 300 Area Interim Filter **ReClassification:** Rejected (1/27/1999)

Backwash Disposal

Depression/Pit (nonspecific) **Start Date:** 1987 **Site Type:** Inactive 1987 **Site Status: End Date:**

This site was a temporary disposal area for filter backwash from the 300 Area Filter Water Plant. Site **Description:** There is a large, depressed area on the east side of the Gravel Pit 6 property that forms a natural

> basin. There is a moderate amount of rabbit brush and grasses growing on it. There are no definite, visible signs that the area was used for backwash disposal. However, there are some truck tire tracks and evidence of some grayish, silty sand on the surface in some areas of the

natural basin.

Waste Type: Water

Waste The unit received approximately 2,460,000 liters (650,000 gallons) of effluent from

backwashing filters at the 300 Area Filter Water Plant (315 Building). The backwash was 90% **Description:**

river water. The sediment in the backwash contained alum which is used as a coagulating agent

prior to filtration. Analysis of the backwash has shown it to be nonhazardous.

Site Code: 300 PHWSA **Classification:** Accepted

Site Names: 300 PHWSA, 300 Area Powerhouse **ReClassification:** Rejected (1/27/1999)

HWSA, 300 Area Powerhouse Hazardous

Waste Storage Area

Site Type: Satellite Accumulation Area **Start Date:** 1991 **Site Status:** Inactive **End Date:** 1995

The site was a hazardous waste storage area used to store nonradioactive solid waste. Currently, Site

the site is an empty chain link fenced area. **Description:**

Waste Type: Barrels/Drums/Buckets/Cans

When active, the unit staged nonregulated waste oil and water treatment chemicals. Other small Waste

quantities of hazardous waste were also stored. **Description:**

Site Code: 300 RLWS Classification: Accepted

Site Names: 300 RLWS, 300 Area RLWS, 300 Area **ReClassification:**

Radioactive Liquid Waste Sewer

Radioactive Process Sewer **Start Date:** 1979 **Site Type:** 1998 **Site Status:** Inactive **End Date:**

The 300 Area Radioactive Liquid Waste Sewer (RLWS) consists of a network of underground, Site **Description:**

double-encased stainless-steel pipe (encased in reinforced-fiberglass or plastic pipe as secondary

containment) draining to the 340 Vault. Leak detection systems are housed in the outer encasement. Fifteen valve boxes are spaced along the gravity-drained pipeline between

generating facilities and the 340 Vault. On October 1, 1998, the 300 RLWS was isolated from the

340 Complex and generating facilities. The west leg of the RLWS collected discharges from the 329, 326, 325, 325-A and 327 buildings. The east leg collected effluent from the 324 building. Both legs join at valve box VB-8, between the 307 basins and the 340 Building. From VB-8 the flow drains to VB-9, and from VB-9 effluent drains to the 340 Vault. Generating facilities are isolated from the RLWS by closed valves outside of each facility. The 340 Vault tanks and the 340-A tanks are also valve-isolated from the RLWS.

Waste Type: Process Effluent

Waste Description:

The sewer received radioactive liquid waste from various 300 Area research and development laboratories. Wastes consisted of radioactive effluent with small quantities of various chemicals, decontamination solutions, acids and bases. Effluent was typically derived from Hanford Site groundwater samples, tank waste samples, contaminated sediments, destructive examination of nuclear fuels, R&D process wastes, and residual waste from waste treatment studies. The waste was sampled at the 340 complex and stored for less than 90 days. Waste was then transported to the 200 West Area for storage or disposal.

Site Code: 300 RRLWS Classification: Accepted

Site Names: 300 RRLWS, 300 Area Retired RLWS, ReClassification:

300 Area Retired Radioactive Liquid Waste Sewer System, Crib Waste System, Contaminated Sewer, Intermediate Level

Radioactive Liquid Waste System

Site Type: Radioactive Process Sewer Start Date: 1954
Site Status: Inactive End Date: 1975

Site Description:

The 300 Area Retired Radioactive Liquid Waste Sewer (RRLWS) is a network of 5-, 8-, 10-, and 15-centimeter (2-, 3-, 4-, and 6-inch) single-walled stainless steel piping and carbon steel fittings buried between 3 and 6 meters (10 and 20 feet) below grade. A separate 8-centimeter (3-inch) carbon steel transfer line installed in 1960 connected the 309 Building to the 340 Complex. No isolation valves, radiation monitors, or other leak detection capabilities were built into the RRLWS system. Since the potential for corrosion was low, the retired system was abandoned in place.

Waste Type: Process Effluent

Waste Description:

The unit received radioactive wastes from various 300 Area facilities including the fuel fabrication and research and development laboratories. Wastes discharged to the sewer included water and small quantities of chemicals, decontamination solutions, aqueous fuel fabrication solutions, acids, and bases. Wastes discharged to the system by the 309 Building included reactor operational wastes such as resin backwash and deionizing solutions. The system handled approximately 100,000 liters per month (25,000 gallons per month) of beta-gamma waste with an upper radiation level of 20 rem per hour. A 1992 video survey shows that highly corrosive materials were transferred by this system. The survey also suggests that mercury contamination and high radiation levels are present.

Site Code: 300 SE Classification: Accepted

Site Names: 300 SE, 300 Area Solvent Evaporator, ReClassification: Closed Out (6/27/1995)

Solvent Evaporator, 300 ASE

Site Type: Evaporator Start Date: 1975

Site Status: Inactive End Date: 1985

Site Description:

The site was a treatment unit for radioactively contaminated spent solvents generated in the fuel fabrication process at the 300 Area. The waste solvents were treated by evaporation in a Brooks Load Lugger (i.e., tank, dumpster). The 300 Solvent Evaporator (300 ASE) lugger (Type A82; Series 3F) was 244 centimeters (96 inches) long, 165 centimeters (65 inches) wide at the top, 127 centimeters (50 inches) wide at the bottom, and 89 centimeters (35 inches) deep. The 300 ASE was constructed of carbon steel with a hinged aluminum sheet metal canopy over the top. The canopy (added in 1978) prevented entry of precipitation while allowing airflow across the top of the solvent. The canopy was hinged so that one end could be lifted for pouring the contents of solvent barrels into the cutout side of the evaporator.

Waste Type: Chemicals

Waste Description:

The unit received approximately 2,300 liters per year (600 gallons per year) of solvents and steam condensate. The solvents consisted mainly of spent trichloroethylene, perchloroethylene, 1,1,1-trichloroethane, and an ethyl acetate/bromine solution. Paint shop solvents that were potentially treated include methyl ethyl ketone, methylene chloride, and petroleum naphtha.

Site Code: 300 SSS Classification: Rejected (1/27/1999)

Site Names: 300 SSS, 300 Area Sanitary Sewer System **ReClassification:**

Site Type: Sanitary Sewer Start Date: 1944

Site Status: Active End Date:

Site The sewer system is comprised of underground sewer lines inside the 300 Area that connect to the **Description:** City of Richland sewer system.

Prior to 1996, the sewer was connected to septic tanks and sanitary leaching trenches located northeast of the 300 Area. The 300 Area Sanitary Sewer utilized gravity and pressure collection lines, septic tanks and leaching trenches. The original sewer system was constructed of concrete and clay pipes and was designated as the 3907 system. The system was connected to a tile field that was replaced, in 1951, by a septic tank and two leaching trenches. Additional septic tanks were added in 1975. The 300 Area Sanitary Trenches (WIDS Site 300-52) site includes two septic tanks and unlined trenches that were connected to the 300 Area Sanitary Sewer System. The 300 Area Sanitary Trenches (WIDS Site 300-52) is a "no action" site in the 300-FF-1

Operable Unit.

On October 1, 1996 the 300 Area Sanitary Sewer System began to discharge to the City of Richland's sewage system. The pipeline to the 300 Area Sanitary Trenches was permanently isolated by welding a plate in place and filling manhole #6 with concrete.

Waste Type: Sanitary Sewage

Waste The sanitary sewer receives sanitary wastes from throughout the 300 Area.

Description:

Site Code: 300 VTS Classification: Accepted

Site Names: 300 VTS, 300 Area Vitrification Test Site, **ReClassification:**

In-Situ Vitrification (ISV) Test Site

Site Type:Process Unit/PlantStart Date:1983Site Status:InactiveEnd Date:1986

Site Description:

The site is an area that is bounded by a 2.4 meter (8 foot) chain-link fence with three strands of barbed wire running along the top. There are three locked gates. The area within the fence is vegetation-free and covered with gravel and cobbles. Currently only the Terra-Vit melter structure and the Large-Scale ISV Off-Gas Assembly (hood) remain at the site. The mobile pilot plant trailer, storage units, metal sheds, sea-land units, spare parts and other support structures were removed in 1999. The vitrified material and soil, miscellaneous equipment, empty barrels, crates, metal scaffolding, and pallets of miscellaneous materials were also removed. Five in-situ vitrified monoliths (up to 1000 tons) had been in the ground on the west side of the site, but it is not known how many remain. One of these monoliths was located below the Large-Scale Off-Gas Hood. Within the test site is a fenced concrete pad where electrical an electrical substation had been located. The transformers have been removed. The electrical transformer pad is a separate waste site that is managed and maintained by the Site Infrastructure Division. See site 300-231, Vitrification Test Site Transformer Pad, Substation C3-S15, for more information.

Waste Type: Soil

Waste Description:

Vitrification was performed on wastes containing americium, plutonium, cesium, cobalt, strontium, and ruthenium. After these tests were performed, the site was cleaned up to regulatory limits and the area released. Other simulated waste tests were performed which produced solid waste materials including five monoliths weighing up to 1000 tons. These large monoliths remain in the ground as of 7/29/98. All simulated in-situ vitrification tests were performed using chemical additives which will require a waste disposition review as part of the site characterization process.

Empty ethylene glycol drums remain at the site. Some cooling systems may still contain glycol.

Waste Type: Equipment

Waste Description:

The site contains excess piping, drums, electrodes, bricks, transformers, HEPA filters, off-gas handling units, cement/grout materials, glass frit, and storage sheds. Some of the material on

outside pallets is deteriorating because of weathering.

Waste Type: Soil

Waste

The site contains soil and vitrified blocks remaining from testing

Description:

Site Code: 300-1 Classification: Accepted

Site Names: 300-1, Old North Richland Automotive ReClassification: No Action (2/24/1999)

Maintenance Yard

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site was the proposed location of the Environmental and Molecular Sciences Laboratory

Description: (EMSL) until excavations for construction began. During excavations, it was discovered that a

Native American burial ground is in the area.

Waste Type: Misc. Trash and Debris

Waste The area was used by North Richland residents to conduct automotive repairs and recreational activities. No evidence exists that radiological contamination may be at the site. Debris

removed from the area in late 1993 included empty bottles, lumber, empty cans of automotive oil, 19-liter (5-gallon) cans and buckets, an 46-centimeter (18-inch) wooden wire spool, an

automotive front grill, old automotive oil filters, etc.

300-2 **Site Code: Classification:** Accepted

300-2, Contaminated Light Water Disposal **ReClassification: Site Names:**

1965 **Start Date:** Site Type: Trench **Site Status:** Inactive **End Date:** 1966

Site The site is a release to soil. The site is currently occupied by the 3766 Building and the area

Description: immediately around it.

Waste Type: Water

Waste **Description:** About 189,250 liters (50,000 gallons) of secondary cooling water and other contaminated water containing 33 millicuries iodine-133 and 12 millicuries iodine-131 were disposed of to ground. About 10 microcuries of alpha emitters (calculated as plutonium-239) and about 40 millicuries of non-volatile beta emitters plus rutheniums were transferred to the trench during the first 36 hours of the incident. A small number of short pumpings were made after that, however, the total gallonage and radioisotopic inventory are insignificant in comparison to those during the first 36 hours.

Site Code: 300-4 **Classification:** Accepted

Site Names: 300-4, DOE 351 Substation Soil **ReClassification:**

Contamination

Site Type: Unplanned Release **Start Date:**

1990 **Site Status:** Inactive **End Date:**

Site

Description:

The site is contaminated soil within the substation fenced area. The area within the fence is an active electrical substation. The substation includes buildings 351-A, 351-B, and concrete pads that contain electrical switching equipment. The substation is surrounded by a cyclone fence with barbed wire on top, except on the southwest where it is bounded by the 305 Building. Locked gates on the north, east, and south sides provide access. The southwest portion of the substation is bounded by underground radioactive materials (URM) signs where the Bonneville Power Administration (BPA) equipment was removed. Six small concrete footings and one large concrete footing are inside the URM. URM signs are posted on the north, south, east, and west sides of the footings area. The cyclone fence marks the north and west boundaries of the URM, but the east and south sides are not roped off. The URM area is a small portion of the whole site and is inactive. The remaining power lines and substation are active. Visible debris includes windblown trash and several small pieces of steel pipe. The southern part of the 618-8 Burial Ground is under the northeast corner of the substation fenced area. The concrete marker for the southwest corner of the 618-8 Burial Ground is present inside the fenced area.

Waste Type: Chemicals

Waste **Description:** The waste is uranium contaminated soil. According to the referenced document, there is a potential for spillage of polychlorinated biphenyl (PCB) to the soil. This statement was based on four samples that contained PCBs in the range of 1 to 3 milligrams per kilogram. The 300-FF-2 Record of Decision for this site also lists solvents as a potential contaminant.

Site Code: 300-5 Classification: Accepted

Site Names: 300-5, 300 Area Fire Station Fuel Tanks, **ReClassification:**

3709A Fire Station

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site Description:

The site was two underground fuel tanks, the pump island, ancillary piping, and contaminated soil. An unknown quantity of contaminated soil, under the fuel dispensing island at the 3709-A Building (300 Area Fire Station) was discovered on April 10, 1992. The fueling facility consisted of two 1893 liter (500 gallon) underground storage tanks (USTs), one containing unleaded gasoline (Tank 300-FS-15), the other diesel (Tank 300-FS-16), and approximately 9.1 meters (30 feet) of piping that lead to the fuel dispenser and island. The release was due in part to sections of corroded flex piping (with multiple pinhole size perforations) located directly under the pump island and also possibly from loose pipe/pump fittings. The pump island was removed immediately following the removal of the tanks and piping. Evidence that confirmed the release consisted of petroleum product odors that were detected by personnel immediately following the lifting of the pump island. The release was additionally confirmed by sampling performed during the site assessment. The system was undergoing permanent closure due to a failed tightness test conducted on August 26, 1991. These tanks were removed on April 14, 1992. The site is not marked in the field.

Based on maps and descriptions, the site is under a paved portion of the access driveway on the southeast side of 3709A Building. A section of the asphalt has been patched where the tanks were dug up.

Waste Type: Oil

Waste One of the storage tanks contained gasoline and the other contained diesel fuel.

Description:

Site Code: 300-6 Classification: Accepted

Site Names: 300-6, 366/366A Fuel Oil Bunkers **ReClassification:**

Site Type:Storage TankStart Date:1964Site Status:InactiveEnd Date:1998

Site Description:

The concrete bunkers were removed in 2001. A large open excavation area (surrounded with orange, plastic safety fence) remains. The soil staged adjacent to the excavation will eventually be used to fill the hole. A large Soil Contamination Area (SCA) had been located on the east side of the excavated area and extended partly into the eastern boundary of the open excavation. The radiological posting in this area was removed in February 2003.

Waste Type: Oil

Waste Prior to the tanks and residual fuel being removed, the bunkers stored product fuel oil for use in

Description: the 384 powerhouse boilers.

Site Code: 300-7 Classification: Accepted

Site Names: 300-7, Undocumented Solid Waste Burial ReClassification: Ground Adjacent to 618-8, Possible Early

Burial Ground Site

Site Type: Burial Ground Start Date:

Site Status: Inactive End Date:

Site The site is a small rise that extends to the north and west from the 300 Area North Parking Lot. It forms an irregular shaped polygon where the north edge of the parking lot is the south edge of the

waste site. The site can be seen as a scarred area in several historical photographs (EMO-1026,

pages A.26, A.30, A.34 labeled Burial Ground 8). Surface debris piles can be seen and

subsurface disturbances have been identified with Ground Penetrating Radar. Currently, the site is covered with natural vegetation. Some of the visible surface debris consists of concrete, trash

and cables. The area of subsurface anomalies is not marked.

Waste Type: Construction Debris

Waste The site contains solid construction debris, such as concrete, metallic waste, asbestos, and

Description: uranium contamination.

Site Code: 300-8 Classification: Accepted

Site Names: 300-8, Aluminum Recycle Storage Area, ReClassification:

North of Railroad and North of 618-8,

Aluminum Shavings Area

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date:

Site The Aluminum Recycle Staging area consists of six irregularly shaped Soil Contamination Areas

Description: located along the railroad track north of 300 Area. The contamination areas are on both sides of

the railroad track and separated by unposted dirt roads.

Waste Type: Misc. Trash and Debris

Waste The area was used to stage uranium contaminated aluminum scrap to be sold to salvage

Description: contractors. Other contaminants include aluminum-silicon alloy and beryllium contaminated

aluminum.

Site Code: 300-9 Classification: Accepted

Site Names: 300-9, Possible Early Burial Ground Sites **ReClassification:**

North of RR and North of 618-8, Solid

Waste Burial Ground

Site Type: Burial Ground Start Date: 1943
Site Status: Inactive End Date: 1945

Site Status: Mactive End Date: 194.

Site The location of the site referred to as the Early Burial Ground is not well documented. It has been confused with the 618-8 Burial Ground and the Undocumented Solid Waste Burial Ground (site

code 300-7) located adjacent to 618-8. A suspect location was identified in the 300-FF-2 Technical Baseline Report using a historical aerial photograph (negative #2530 taken in 1954), but additional review of the information determined that site to be a borrow pit. Other historical aerial photographs (negative #9619 taken in 1962) were studied and determined two other suspect areas. These locations were selected for geophysical surveys during the 300-FF-2 Operable Unit

Limited Field Investigation activities. Later, an aerial photograph taken in 1948 was found

(picture number 89711).

Waste Type: Misc. Trash and Debris

Waste Actual burial inventory is unknown. Process knowledge suggests the waste would consist of the

Description: uranium contaminated waste from very early 300 Area experimental processes.

Site Code: 300-10 Classification: Accepted

Site Names: 300-10, Burial Trench West of Process ReClassification: Closed Out (12/17/1997)

Trenches

Site Type: Burial Ground Start Date: 1950

Site Status: Inactive End Date:

Site The northwest corner terminates very near a dirt road that intersects the midpoint of the west 316-

Description: 5 Process Trenches. A field walkdown done on 11/18/94 reported the site appeared as a soil

covered field with natural vegetation. The site has been remediated and closed out, and

revegetated with crested wheatgrass.

Site Code: 300-11 Classification: Accepted

Site Names: 300-11, Pumphouse Underground Gasoline **ReClassification:**

Tank, 382 Pumphouse UGT, 382-1

Site Type:Unplanned ReleaseStart Date:1943Site Status:InactiveEnd Date:1992

on The base of the state of the

The site was releases to the soil that were discovered following the removal of an underground gasoline tank in September 1992. The tank had failed a leak test. The tank was removed,

however, the contaminated soil has not been cleaned up. See Section on Cleanup Activities. The

site is not marked in the field and currently appears as a graveled lot adjacent to the 382

Building.

Originally, there were 3 tanks at this location, Tanks 382-1, 382-2, and 382-3. Tanks 382-2 and 382-3 were excavated and removed in 1994. A full site assessment (WAC 173-360-385) was performed for these tanks. There was no contamination found in the soil. (See Site Comment

Section and Field Work - Analytical Sampling for these two tanks).

Waste Type: Oil

Waste The gasoline fuel storage tanks were used to store leaded and unleaded gasoline for use by the **Description:** emergency gasoline engine powered pumps in the 382 Building. Tank 382-1 was removed in

1992. Tanks 382-2 and 382-3 were removed in 1994.

Site Code: 300-12 Classification: Rejected (9/2/1998)

Site Names: 300-12, 325 Laboratory Diesel Fuel Tank **ReClassification:**

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1992

Site The unit is located at the northwest corner of the 325 Building. There was a single underground

Description: diesel fuel storage tank. It was taken out of service and removed (including accessible piping) in October, 1992. Sampling was performed at the time of tank removal (See Cleanup Activities Section). The site currently appears as a paved area between the building and air conditioning

equipment. It can be distinguished from surrounding pavement by its newer appearance.

Waste Type: Storage Tank

Waste The tank was used to store diesel fuel for an emergency generator located beside the 325

Description: building. There are no known leaks or spills associated with this tank.

Site Code: 300-13 Classification: Rejected (9/2/1998)

Site Names: 300-13, 350 Building Release To Sanitary **ReClassification:**

Sewer System

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is an unplanned release to the 300 Area Sanitary Sewer System. The site was discovered during routine surveillance and maintenance of the 350 Building Sanitary Sewer Lift Station. The

lift station is a below grade sewage pump station accessible through a raised manhole, painted white and located in the grassy strip of land on the west side of the 350 Building between the security fence and the roadway. A gray electrical panel is located adjacent to and on the east side

of the manhole. The panel houses the controls for the sewer lift pumps.

Waste Type: Sanitary Sewage

Waste The site was sanitary sewage contaminated by latex paint.

Description:

Site Code: 300-14 Classification: Accepted

Site Names: 300-14, 331 Building Animal Waste Tanks ReClassification: Rejected (9/22/1998)

Pit

Site Type: Depression/Pit (nonspecific) Start Date: 1974
Site Status: Inactive End Date: 1977

Site Description:

This site includes the unlined pit east of the building, a backwash storage tank, and six diversion chambers that are located north of the pit. Originally, the animal waste collection tanks were located in a pit just east of the 331-D Animal Waste Treatment Building. The pit is 28.0 meters (92 feet) by 22.3 meters (73 feet) and approximately 7.6 meters (25 feet) deep. The sides of the pit slope about 30 degrees. The tanks have been removed. Eight concrete tank pedestals remain

at the bottom of the pit. A stairway leads to the bottom of the pit. A backwash storage tank remains between the 331-D building and the pit. Water was observed at the bottom of the pit. Six

diversion chambers for the sewer system are located northwest of the pit.

Waste Type: Animal Waste

Waste Animal waste from the 331 Complex were routed through the animal waste sewer to the 331-D

Description: animal waste treatment facility.

Site Code: 300-15 Classification: Accepted

Site Names: 300-15, 300 Area Process Sewer System **ReClassification:**

Site Type: Process Sewer Start Date: 1943

Site Status: Active End Date:

Site Description:

The site is an underground process sewer extending throughout the 300 Area for the disposal of process wastes such as steam condensate, cooling water and non-regulated liquids. The piping consists primarily of 20 centimeter (8 inch) vitrified clay pipes with acid-proof joints. Many other materials have been used in more recent retrofits and system modifications, including cast-iron, stainless-steel, carbon steel, and polyvinyl chloride. Large sections of the process sewer were relined with cured-in-place epoxy during the 1995 Project L-070 system upgrade. These process sewer feeder pipes join larger 46 centimeter (18 inch) diameter vitrified clay pipes that currently discharge to the Treated Effluent Disposal Facility (TEDF) Sump northeast of 306E Building. Prior to 1995, the system discharged to the 316-5 Process Trenches, which were constructed in 1975. Before 1975 the process sewers discharged to the north and south process ponds (WIDS Sites 316-2 and 316-1).

Project L-070 upgraded the 300 Area process sewer and retention process sewer systems with a combination of vacuum, gravity and pressurized piping. The process sewer currently handles up to 760 liters per minute (200 gallons per minute), though rates of 4900 liters per minute (1300 gallons per minute) were observed during the late 1980's. Other ancillary systems are also part of the 300 process sewer. These systems include the flow monitoring stations, catch basins, sample ports, pumps, and the lift stations.

Waste Type: Process Effluent

Waste Description:

Process sewer waste typically included: potable water, cooling water, precipitation runoff, waste brine solution (sodium chloride with magnesium salts), chromium, copper, uranium nitrate, sulfate, and fluoride ions. Effluent is traditionally composed of three sources: potentially contaminated effluent, sanitary water, and cooling water.

Nearly 70 percent of the process sewer effluent results from once-through cooling for HVAC systems, pumps, compressors, and other equipment. More than 80 percent of the discharge points contribute less than 19 liters per minute (5 gallons per minute) of effluent to the process sewer. Discharge rates were reported as high as 4900 liters per minute (1300 gallons per minute) in the 1980's, while current figures estimate flow rates of less than 760 liters per minute (200 gallons per minute).

Four chief chemical contaminants in the process sewer have been lead, silver, acetone, and cyanide. Silver was most likely contributed from the 3705 photographic processes. Cyanide compounds were detected downstream of the 384 powerhouse, and are attributable to either coal dust or the regeneration salt and softening resin used in water conditioning. Most of the lead is believed to have entered the process sewer from prior 3709 building (paint shop) processes. Acetone releases appear to have occurred in small quantities when labware was washed.

Site Code: 300-16 Classification: Accepted

Site Names: 300-16, Solid Waste Near 314 Building, Contamination Found During Utility Pole ReClassification:

Replacements

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is not marked in the field. All of the wooden poles in this area are painted yellow and **Description:** posted with "Radiologically Controlled Area" and "Underground Radioactive Material" signs.

The site described in BHI-00012 as being covered with crushed rock under an overhead steam

utility line. There is a minor amount of small scraps of rusty steel and aluminum.

There are two additional occurrences of a similar nature that were identified. On March 6, 1992 a telephone pole that was located between 303A and 3722 was removed and found to have contamination on a five foot length section that had been below grade. On September 22, 1995 another telephone pole located on the east side of the 314 Building was removed. The lower four feet was found to be contaminated.

Waste Type: Soil

Waste On March 6, 1992, May 4, 1994, September 22, 1995 radioactive contamination (yellow-cake **Description:** uranium) was discovered on the bottom ends of several utility poles that had been removed.

Site Code: 300-17 Classification: Rejected (9/2/1998)

Site Names: 300-17, 331 Building Trench, 331-D Ditch, ReClassification:

Outfall A

Site Type:DitchStart Date:Site Status:ActiveEnd Date:

Site The site is a ditch that runs from the southeast corner of the 331-D Building to the top of the west bank of the Columbia River. The ditch is fed by an underground pipe which drains stormwater

from the roadway between the north side of Building 331-C and the south side of Building 331. The open trench is piped to a culvert passing beneath a gravel roadway and the perimeter fence. The discharge is approximately 46 meters (150 feet) from the river. The bank is moderately

sloped with natural vegetation. This outfall results from non-industrial sources.

The site has a natural berm at the fence line. No erosion is evident on the sloping bank.

Waste Type: Stormwater Runoff

Waste The waste is stormwater runoff from the roadway between the 331 and 331-C Buildings. **Description:**

Site Code: 300-18 Classification: Accepted

Site Names: 300-18, SCA #4, Surface Contaminated ReClassification:

Area #4

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site In December 1994 photographs, the site appeared as a square area that has been surface stabilized

with clean fill and posted at the corners with "Underground Radioactive Material" signs. There was no vegetation on the site's surface. In 1994, there was an area of debris near the site. A

RARA site walkdown done in August 1998 found the site to be the same as it was described in

1994.

Description:

Waste Type: Misc. Trash and Debris

Waste The site contains contaminated soil, metal shavings, nuts and bolts and concrete reading 3,000 to

Description: 4,000 disintegrations/minute beta-gamma.

Site Code: 300-19 Classification: Accepted

Site Names: 300-19, 324 Sodium Removal Pilot Plant, ReClassification: Closed Out (6/9/1997)

324 Building Sodium Removal Pilot Plant

Site Type:Process Unit/PlantStart Date:1979Site Status:InactiveEnd Date:1987

Site The Sodium Removal Pilot Plant consisted of a reaction vessel, a nitrogen gas supply, a steam

Description: supply, and equipment for decontamination studies. The reaction vessel was decomissioned and

removed in 1991.

Waste Type: Chemicals

Waste Decontamination and research and development activities generated liquid effluents that

Description: contained radionuclides and sodium hydroxide. The sodium hydroxide was neutralized prior to

discharging the solution to a crib.

Site Code: 300-21 Classification: Rejected (2/12/1999)

Site Names: 300-21, 333 Building Underground **ReClassification:**

Limestone Tank

Site Type: Neutralization Tank Start Date:

Site Status: Inactive End Date: 1973

Site The site was an underground storage tank that held limestone used to neutralize acid wastes. The

Description: Waste Acid Treatment System (WATS) Limestone Neutralization Tank leaked in 1973 and was

removed.

Waste Type: Equipment

Waste The waste was a tank containing limestone used to neutralize acid waste. The tank was removed

Description: in 1973.

Site Code: 300-22 Classification: Accepted

Site Names: 300-22, 309 Building B-Cell Cleanout Leak **ReClassification:**

Site Type:Unplanned ReleaseStart Date:1962Site Status:InactiveEnd Date:1962

Site The site is an unplanned release from a parted hose coupling that contaminated the ground outside

Description: the emergency airlock of the 309 Building on September 20, 1962. The site is covered with new

asphalt. The asphalt area is roped off and trucks are not allowed on the asphalt. The rupture loop

annex is present below ground at the site.

Waste Type: Process Effluent

Waste The waste is soil that was contaminated from decontamination efforts intended to reduce the

Description: overall levels of radioactivity within the reactor following the unplanned release that occurred on

October 19, 1962.

Site Code: 300-23 Classification: Accepted

Site Names: 300-23, PRTR Diesel Storage Tank, 309-1 ReClassification: Closed Out (10/24/1996)

UST

Site Type:Storage TankStart Date:1959Site Status:InactiveEnd Date:1969

Site This site no longer exists as a waste site. The tank has been removed and the trench backfilled.

Description: Previously, this site was a tank that held diesel fuel used to power the Plutonium Recycle Test

Reactor (PRTR) emergency generator located inside the 309 Building.

Waste Type: Storage Tank

Waste The waste was the abandoned underground storage tank (UST). Residual diesel fuel and water

Description: remained in the tank.

Site Code: 300-24 Classification: Accepted

Site Names: 300-24, Soil Contamination at the 314 **ReClassification:**

Metal Extrusion Building

Site Type: Unplanned Release Start Date: 1994

Site Status: Inactive End Date:

Site The area around the 314 building is mostly paved with a few areas of exposed soil. A site visit in **Description:** June 1995 found the area posted with Underground Radioactive Material signs that also say

"Contact Radiological Control Group prior to excavating". Later, the Underground Radioactive

Material signs were moved to the 300 Area fence to eliminate the need for smaller individually

posted areas inside 300 Area.

Waste Type: Soil

Waste Soil samples of the dirt in the trench near the 314 Building found mostly uranium and a trace of

Description: cesium-137. The gross alpha count was 896 picocuries per gram.

Site Code: 300-25 Classification: Accepted

Site Names: 300-25, 324 Building ReClassification:

Site Type: Laboratory Start Date: 1966

Site Status: Active End Date:

Site The 324 Building is a substantial concrete and steel structure. Portions of the Building are

Description: covered under a RCRA Closure Plan with on-going closure activities in progress.

The 324 Building is divided into four integrated-but-separate primary work areas: the Engineering Development Laboratory-102 (non radioactive) or EDL-102, the Engineering Development Laboratory-146 (radioactive) or EDL-146, the radiochemical engineering cells (REC), and the Shielded Materials Facility (SMF). Additional facilities in the 324 Building include development laboratories, maintenance shops, and service areas. Within the 324 Building are controlled experimentation areas referred to as 'hot cells' with radiation shielding provided by thick concrete walls. To protect against releases of radioactive material from the hot cells to the environment, integral metal liners with sumps (i.e., without drains) were installed in the cells and tank vaults. Confinement of radioactive particulate matter within the shielded cells is provided by

a directed air flow through high-efficiency particulate air (HEPA) filter ventilation system.

The RCRA Closure Plan covers the REC portion of the building, including the hot cells, low level and high level vault tanks, the airlock and pipe trench. See DOE/RL-96-73, Rev. 1 (3-98) for additional details.

In July of 1999, the Washington State Department of Ecology identified the following as areas of interest for this facility:

- 324 Shielded Material Facility (SMF) South Cell
- 324 Shielded Material Facility (SMF) East Cell
- B-Cell (Hot Cell)
- A-Cell (Hot Cell)
- C-Cell (Hot Cell)
- D-Cell (Hot Cell)
- Hot Cell Airlock (Hot Cell)
- High-Level Vault (4 tanks)
- Low-Level Vault (4 tanks)
- 324 Process Sewer System (WIDS site 300-15)
- 324 Retention Process Sewer System (WIDS site 300-214)
- EDL-102 (PNNL Vitrification Pilot)
- High Bay (2 tanks with heels)
- Room 146 (Fume hood melter)
- Room 3B, 3F (Laboratory and Rad Flume Hood), and Storage Vault
- Waste Water Diverter System, Catch Tank and Ion Exchange Tank
- HNO3 Bulk Chemical Tank West Side of Facility.

The areas listed above that are within the boundaries of the TSD facility are:

- B-Cell (Hot Cell)
- A-Cell (Hot Cell)
- C-Cell (Hot Cell)
- D-Cell (Hot Cell)
- Hot Cell Airlock (Hot Cell)
- High-Level Vault (4 tanks)
- Low-Level Vault (4 tanks).

Waste Type: Equipment

Waste Description:

Currently, the facility is undergoing deactivation to address radiological and chemical contamination remaining in the facility. The waste is contaminated equipment that is being

removed from the facility, packaged, and transported to the 200 Area for burial.

Site Code: 300-26 Classification: Accepted

Site Names: 300-26, Powerhouse Fuel Oil Spill, 384 ReClassification: Rejected (1/27/1999)

Powerhouse #6 Fuel Oil Spill, Delivery

Truck Spillage on Roads

Site Type:Unplanned ReleaseStart Date:1991Site Status:InactiveEnd Date:1991

The site was an unplanned release. The area of the release was previously used as a coal pile for the 384 Powerhouse. The soil is stained dark from coal dust. There is no visible evidence of the #6 fuel oil spill in the area. On the south side of the site adjacent to Apple Street there is an

Hanford Site Waste Management Units Report January 2004 Underground Radioactive Material sign, and a buried gas pipeline.

Waste Type: Oil

Waste The waste is #6 fuel oil contaminated soil and gravel. The release occurred on December 31,

Description: 1991. The occurrence report does not contain an estimate of the volume. There is no

information on the extent of the spill. The leak was not discovered until after the truck left the

job site.

Site Code: 300-27 Classification: Accepted

Site Names: 300-27, Soil Contamination at 329 ReClassification: Rejected (2/12/1999)

Biophysics Laboratory

Site Type:Unplanned ReleaseStart Date:1991Site Status:InactiveEnd Date:1991

Site Radioactive contamination was found at the site during a routine survey on August 14, 1991. The

Description: site is an area of crushed rock gravel with no vegetation located near the outside wall of the 329

Building. There are no hazard postings at this location. There is no visible evidence of radioactive contamination that was removed from this site. A cement pad with a liquid argon tank

has been constructed adjacent to the site.

Waste Type: Soil

Waste The waste was contaminated soil that was later cleaned up.

Description:

Site Code: 300-28 Classification: Accepted

Site Names: 300-28, Contamination Found Along Ginko **ReClassification:**

Street, Solid Waste Site Near 303-G

Building

Site Type: Unplanned Release Start Date: 1994

Site Status: Inactive End Date:

Site The site is contaminated asphalt and soil beneath Ginko Street. Patches of new asphalt are visible

Description: where utility trenches were excavated.

Waste Type: Soil

Waste The waste is radioactively contaminated soil found just beneath the asphalt paving.

Description:

Site Code: 300-29 Classification: Accepted

Site Names: 300-29, 305-B Berm, Source Location of **ReClassification:**

UPR-600-11 Soil

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is a "U" shaped soil berm that surrounds the east wing of the 305-B Chemical Waste

Description: Storage Building.

Waste Type: Soil

Waste

The waste is radioactively contaminated soil (reported 5/29/80).

Description:

Site Code: 300-30 **Classification:** Accepted

Site Names: 300-30, 3705 Photography Building **ReClassification:** Rejected (1/27/1999)

1963 Process Unit/Plant Site Type: **Start Date:**

Site Status: Active **End Date:**

Site **Description:**

footings and a slab-on-grade concrete floor. A corrugated metal sided mechanical room penthouse has been erected on the building roof. The roof itself is flat and is covered with builtup tar and gravel. The building contains no windows. Interior partitions are either gypsum wall board on stud frames or movable metal. Utilities serving the building include sanitary water and sewer, compressed air, process water, and electricity. The building was connected to the process sewer, but all connections were capped when the building was remodeled, probably between 1988 and 1990. The capped process sewer connection for the silver reclamation process is located behind a sheet rock wall that has been marked with an identification sticker.

The 3705 Building is a rectangular, one-story concrete block building erected on concrete

Waste Type: Chemicals

Waste **Description:** The waste is spent photoprocessing chemicals. Prior to silver reclamation, the chemicals designate as a hazardous waste. After the silver reclamation, the solutions are nonregulated and nonhazardous. The treated solutions are disposed of offsite. The recovered silver is shipped offsite for recycling.

Additional waste is nondangerous/nonhazardous washwater and overflow from the film developers that goes to the City of Richland sanitary sewer system.

300-32 **Site Code: Classification:** Accepted

300-32, 333 Building, 333 N Fuels **Site Names: ReClassification:**

Manufacturing Building, New Fuel

Cladding Facility

Start Date: 1961 **Site Type: Fabrication Shop**

Site Status: End Date: Inactive

Site The 333 building is a large steel frame building with double metal insulated panel exterior walls.

The foundation and floors are concrete. The roof covering consists of metal "Accustideck" **Description:**

insulated foam board covered with four-ply graveled asphalt roofing. A high bay through the

length of the building accommodates bridge cranes and a monorail hoist.

Waste Type: Chemicals

Waste

Chemical wastes included nitric, sulfuric, hydrofluoric, chromic-nitric-sulfuric and other acids, along with degreasers trichloroethylene in the 1960's and early 1970's and perchloroethylene and **Description:**

111-trichloroethane in the 1970's and 1980's. Heat treatment salts included sodium nitrate, sodium and potassium nitrite, and sodium and potassium chloride. Additionally, many alcohol

and acetone cleansers were used throughout the building's history.

Site Code: 300-33 Classification: Accepted

Site Names: 300-33, 306W Metal Fabrication **ReClassification:**

Development Building Releases

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site is the contaminated soil around and under the 306W Building. The area around the **Description:** 306W building is paved and posted as having underground radioactive contamination.

Waste Type: Soil

Waste The waste is contaminated soil under the paved areas surrounding the 306W building.

Description:

Site Code: 300-34 Classification: Accepted

Site Names: 300-34, 300 Area Process Sewer Leak ReClassification:

(found during Project L-070 excavation at

(found during Project L-0/0 excavation at manhole PS-87)

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site The site was a release to soil that was discovered during excavation to install a new manhole (PS-Description: 87). PS-87 is a 0.7 meter (2.3 feet) diameter sewer opening with a round metal cover at grade.

The cover is labeled "Confined Space" and "Radioactive Material Internally Contaminated."

1995

Waste Type: Soil

Description:

Waste Soil contaminated with radioactive material was found at about the 3.65 meter (12 foot) depth

during excavation and installation of manhole PS-87, Project L-070 (300 Area Process Sewer Upgrade). Maximum soil contamination levels were beta-gamma 10,000 disintegrations per

minute. Soil sample results reported 525 picocuries per gram Total Beta and 91 picocuries per

gram Total Alpha.

Site Code: 300-35 Classification: Accepted

Site Names: 300-35, 3706A Fuel Storage Tank ReClassification: Closed Out (2/12/1999)

Site Type: Storage Tank Start Date:
Site Status: Inactive End Date:

Site The site is an abandoned underground fuel storage tank. A 0.51 meter by 0.51 meter (1.7 feet by

Description: 1.7 feet) concrete block and sign (at the tank fill connection location) marks the location of the

underground tank. The sign reads "EMPTY 300 GALLON UNDERGROUND DIESEL FUEL TANK LOCATED HERE. CONTACT MAINTENANCE Environmental Services South (376-

7210) for information".

Waste Type: Storage Tank

Waste The waste is an abandoned underground fuel storage tank that was pumped out and closed in

Description: place.

Site Code: 300-36 Classification: Rejected (1/27/1999)

Site Names: 300-36, 384 Powerhouse Oil Release to **ReClassification:**

French Drain

Site Type:Unplanned ReleaseStart Date:1995Site Status:InactiveEnd Date:1995

The site was an unplanned release to a french drain. The french drain received condensate return

Description: from the steam heating system that went to the fuel oil bunkers. The french drain is a 0.65 meter (2.13 feet) diameter drain with a rust colored lid. Although gravel around the drain is slightly

stained, it is most likely caused from normal steam condensate activity.

Site Code: 300-37 Classification: Accepted

Site Names: 300-37, PCB Leak to Soil Adjacent to 335A ReClassification: Closed Out (1/27/1999)

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The site was a polychlorinated biphenyl (PCB) leak that contaminated the soil. The leak

Description: originated from a rectifier located on a concrete pad outside of the 335-A Building. The rectifier

was installed in the early 1970's, but was never activated.

There are no signs marking the location of the rectifier. The site can only be determined by the

use of detailed maps and archive photographs.

Waste Type: Oil

Waste The waste was soil contaminated with polychlorinated biphenyls.

Description:

Site Code: 300-39 Classification: Accepted

Site Names: 300-39, 309 Building Ex-vessel Irradiated **ReClassification:** Fuel Storage Basin, 309 Building Irradiated

Fuel Storage Basin, 309 Fuel Storage Basin

Site Type:StorageStart Date:1960Site Status:InactiveEnd Date:1974

Site The Fuel Storage Basin is empty. All fuel handling and storage equipment has been removed.

Description: Gates, stoplogs and fixtures have been removed and all that remains are studs where the

equipment was located. The basin has been covered with a plywood, sheet metal and metal grating cover supported by channel iron. This cover made it impossible to check the basin overflow drain system to see if they have been plugged. The Fuel Storage Basin is "L" shaped and may be described as having two sections. The largest section is the Fuel Storage Basin which runs north/south and was the first pit built; the pit is 40ft (12.2 m) long, 20 ft (6.1 m) wide and 34ft (10.4 m) below grade. The other section is the Loadout Facility which has two sections that run east/west and are smaller than the original basin and were built as the first basin reached capacity; one basin is 26 ft (7.9 m) long, 5 ft (1.5 m) wide, and 26 ft (7.9 m) below grade and the other is 24 ft (7.3 m) long, 8 ft (2.4 m) wide, 26 ft (7.9 m) below grade. The ion vault and the

truck bay are located at the east end of the Loadout Facility.

Waste Type: Equipment

Waste **Description:** The waste is radioactively contaminated equipment and structures.

Site Code: 300-40 **Classification:** Accepted

Site Names:

300-40, Corrosion of Vitrified Clay Sewer

Pipe

Site Type:

Unplanned Release

Start Date:

ReClassification:

1980

Site Status:

Inactive

End Date:

Description:

Currently, the site appears as an uneven gravel covered area. It is bounded by a concrete curb and concrete pad on the west and a rail spur on the east. The southern section of the site is made up of

the area around 303-F and the 311 Tank Farm. The northern end of the site is covered by the

3712 building.

Waste Type:

Process Effluent

Waste **Description:** Potential wastes received in this piping system would consist of chemicals used in the 313 Building fuels manufacturing process. These include nitric acid, sodium hydroxide, alcohol, trichloroethylene, phosphoric acid, Duponol-M-3, hydrofluorosilicic acid, thorium, uranium,

cutting oils, etc.

Site Code: 300-41 **Classification:** Accepted

Site Names:

300-41, 306E Neutralization Tank, Underground Lime Tank and Valve Pit **ReClassification:**

Site Type:

Neutralization Tank

Start Date:

Site Status:

Inactive

End Date:

Site

Description:

The site includes a neutralization tank and valve pit. The valve pit is constructed of concrete and is covered by a 2.18 meter (7.15 foot) diameter metal lid. The top of the pit is flush with the ground surface on its north side and approximately 5 centimeters (2 inches) above grade on its south side. A rectangular hatch in the lid allows access to the pit. The hatch is labeled "Confined Space." It appears as though there are three ports in the lid where pipes or hoses could enter the pit. These three ports are currently closed. The pit is surrounded by sand and four metal safety posts. All that is visible of the neutralization tank is a riser that appears to be made of metal; the riser appears to be discolored by rust. The riser is covered by a 0.72 meter (2.36 foot) diameter metal lid, that is greater in diameter than the riser itself. The lid is labeled "Neutralization Tank" in fading black paint. The lid is held in place by a metal bar, bolts and wing nuts. The metal bar has discolored the lid with rust. The top of the lid is 0.42 meters (1.4 feet) above the ground surface, which is sand.

Waste Type:

Chemicals

Waste **Description:** The neutralization tank and valve pit intercepted and neutralized nitric acid-bearing chemical wastes before discharge to the process sewer. In 1979, a HEDL Radiological Engineering report

stated, among other things, "The lime pit...contain[s] uranium and thorium sludge."

300-42 **Site Code:**

Classification: Rejected (2/24/1999)

Site Names:

300-42, 306E Fabrication and Testing

ReClassification:

Laboratory

Fabrication Shop Start Date: Site Type:

Site Status: End Date: Active

The site is the 306E Building. The area around the 306E building is paved and posted as having Site

underground radioactive contamination. **Description:**

Currently, the building is occupied by COGEMA. The building is being used for instrument

development and Computer Aided Design (CAD) support.

Site Code: 300-43 **Classification:** Accepted

Site Names: 300-43, Unplanned Release Outside the **ReClassification:**

304 Building

Site Type: Unplanned Release **Start Date:** 1972 1989 **Site Status:** Inactive **End Date:**

The site is uranium contaminated soil around the 304 building (formerly the 304 Concretion Site Facility) in the 300 Area. The site also includes residual contamination remaining in the 304 **Description:**

> Storage Area (304 SA). The 304 Building is posted "Fixed Contamination Area." Sections of concrete and asphalt on the north side of the building are painted gray and posted "Fixed Contamination Area," including the fenced area. The painted and posted "Fixed Contamination Area" continues in a thin strip along the west side of the building, then grows to include a concrete or asphalt pad on the south side of the building. A thin strip of gray paint continues along the east side of 304, ending at the south wall of the change room. This painted area on the east side of the building is not posted "Fixed Contamination Area," but the unpainted asphalt further east is. The signs in the unpainted asphalt are approximately in line with the east edge of the 304 change room. A row of "Radiologically Controlled Area" signs runs along the south side

of the 304 and 303A Buildings with the signs facing to the south.

Soil Waste Type:

The waste is uranium contaminated soil remaining following operations of the 304 CF and 304 Waste **Description:** SA facilities. Sampling and analysis during TSD closure activities for the 304 CF and 304 SA

showed uranium contamination at levels up to 256 micrograms/gram for shallow soils at the

exterior storage pad.

300-45 **Site Code: Classification:** Accepted

Site Names: 300-45, Surface Contamination Area, **ReClassification:** Closed Out (12/17/1997)

Location 3: Bird Droppings Area (Southwest corner of the 316-5 process

Trenches Fence Line). SCA #1

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:**

Heavy vegetation growth and anthills are in the area. The area has been downposted and released, Site

and is no longer marked or posted. It was remediated in 1997 and closed out. **Description:**

Soil Waste Type:

Waste **Description:** Site Code: 300-46 Classification: Accepted

Site Names: 300-46, Soil Contamination Surrounding ReClassification:

3706 Building

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date:

Site This site estimates the extent of uranium, transuranic and chemical contamination of the 3706

Description: Building and the surrounding area. The ground surrounding the 3706 building is not posted as a

radiologically controlled area. The 3706 Building is posted "Fixed Contamination Area."

Numerous pipes were observed exiting the exterior walls on all sides of the building. Several of these pipes were associated with rust stains on the side of the building and the nearby ground.

Several french drains were also observed on all sides of the building. Twenty recognized

miscellaneous streams fall within the current extent for this site.

Waste Type: Chemicals

Waste Contamination of the area surrounding the 3706 Building is believed to have resulted primarily from operations and associated spills and releases. Although radiological surveys near and

around the 3706 Building have not detected any radiologically contaminated soil, subsurface contamination is suspected. The 3706 Building is contaminated with both radiological and chemical constituents, including high-activity substances. These wastes are composed of all components of the bismuth phosphate, REDOX, PUREX, and RECUPLEX processes along with laboratory cleansers, reagents and drying agents, as well as plutonium, uranium, thorium, and beryllium. Mercury deposits from multiple laboratory uses also were very prevalent. Additional chemical wastes include: sodium thiosulfate, hydroxylamine hydrochloride, barium chloride,

barium nitrate, magnesium perchlorate, sodium iodine, sodium carbonate,

thenoyltrifluoroacetone, thenoyltrifluoroacetone-benzene solutions, boric acid, silver nitrate, cupric oxide, arsenic nitrate, zinc nitrate, ammonium chloride, tartaric acid, and cupferron, Other wastes result from the spread of irradiated metal dusts and fines from the machining and grinding of metallurgical test samples. Contamination results from both inadequate containment systems and from spills, overflows, vaporizations, spreads of radioactive dusts and fines, and

other incidents involving the loss of control of radioactive materials.

The Following Sites Were Consolidated With This Site:

Site Code: 300-131

Site Names: 300-131, 3706 Fire Sprinkler System Water, Miscellaneous Stream #515

Reason: Within Boundary Of Larger Site

Site Code: 300-132

Site Names: 300-132, 3706 Building Steam Condensate, Miscellaneous Stream #368

Reason: Within Boundary Of Larger Site

Site Code: 300-133

Site Names: 300-133, 3706 Building Steam Condensate, Miscellaneous Stream #367, Injection Well #27

Reason: Within Boundary Of Larger Site

Site Code: 300-134

Site Names: 300-134, 3706 Building Steam Condensate, Miscellaneous Stream #362

Reason: Within Boundary Of Larger Site

Site Code: 300-135

Site Names: 300-135, 3706 Building Steam Condensate, Miscellaneous Stream #365

Reason: Within Boundary Of Larger Site

Site Code: 300-136

Site Names: 300-136, 3706 Building Steam Condensate, Miscellaneous Stream #366

Reason: Within Boundary Of Larger Site

Site Code: 300-137

Site Names: 300-137, 3706 Building Steam Condensate, Miscellaneous Stream #440

Reason: Within Boundary Of Larger Site

Site Code: 300-138

Site Names: 300-138, 3706 Building Steam Condensate, Miscellaneous Stream #360

Reason: Within Boundary Of Larger Site

Site Code: 300-139

Site Names: 300-139, 3706 Building Steam Condensate, Miscellaneous Stream #357

Reason: Within Boundary Of Larger Site

Site Code: 300-140

Site Names: 300-140, 3706 Building Steam Condensate, Miscellaneous Stream #356

Reason: Within Boundary Of Larger Site

Site Code: 300-141

Site Names: 300-141, 3706 Building Steam Condensate, Miscellaneous Stream #439, Injection Well #29

Reason: Within Boundary Of Larger Site

Site Code: 300-142

Site Names: 300-142, 3706 Building Steam Condensate, Miscellaneous Stream #369, Injection Well #30

Reason: Within Boundary Of Larger Site

Site Code: 300-143

Site Names: 300-143, 3706 Building Steam Condensate, Miscellaneous Stream #361

Reason: Within Boundary Of Larger Site

Site Code: 300-144

Site Names: 300-144, 3706 Building Steam Condensate, Miscellaneous Stream #358

Within Boundary Of Larger Site Reason:

300-145 **Site Code:**

Site Names: 300-145, 3706 Building Steam Condensate, Miscellaneous Stream #438, Injection Well #25

Reason: Within Boundary Of Larger Site

Site Code: 300-146

Site Names: 300-146, 3706 Building Stormwater Runoff, Miscellaneous Stream #364

Within Boundary Of Larger Site Reason:

300-147 **Site Code:**

Site Names: 300-147, 3706 Building Stormwater Runoff, Miscellaneous Stream #363

Within Boundary Of Larger Site Reason:

Site Code: 300-148

300-148, 3706 Building Stormwater Runoff, Miscellaneous Stream #359, Injection Well #22 **Site Names:**

Reason: Within Boundary Of Larger Site

Site Code: 300-149

Site Names: 300-149, 3706A Building Steam Condensate, Miscellaneous Stream #432, Injection Well #28

Reason: Within Boundary Of Larger Site

Site Code: 300-150

Site Names: 300-150, 3706 Building Steam Condensate, Miscellaneous Stream #430

Reason: Within Boundary Of Larger Site

Site Code: 300-47 **Classification:** Rejected (2/12/1999)

300-47, Residual Hazardous Substances **Site Names:**

Northwest of 3708 Building

Start Date: **Site Type:** Unplanned Release

Site Status: End Date: 1989 Inactive

The site was identified as two locations of potential contamination near the 3708 Building that Site **Description:**

resulted from tank leakage. The area around the 3708 Building is not currently posted for

contamination and there is no evidence of underground tanks. The area is partially paved with asphalt, and otherwise surfaced in crushed gravel. There are no markers where the chemical tank and the oil tank were located. The nearby 3708 Building is posted as "radiologically controlled

ReClassification:

area", and is not currently in use.

Site Code: 300-48 **Classification:** Accepted

300-48, Thorium Oxide and Fuel **ReClassification: Site Names:**

Fabrication Chemical Wastes Around 3732

Building

Unplanned Release **Start Date:** 1949 **Site Type: Site Status: End Date:** 1970 Inactive

This site is the 3732 Building foundation and the surrounding soil contamination. The site Site **Description:** appears as a gravel covered mound. There are no hazard postings except for two signs related to

the adjacent 303B Building.

Waste Type: Soil

The 3732 Building contained standard fuel fabrication chemical wastes, as well as residual Waste thorium oxide contamination in crevices and areas throughout and near the building. The **Description:** contaminated soil is underground. The practice of flushing contamination on floors outside to

the dirt is a possible explanation for the source of the soil contamination.

Demolition and Inert Waste **Waste Type:**

Waste The foundation of the 3732 Building was not removed as part of demolition activities. The **Description:** contamination areas on the foundation were covered with a fixative paint before the site was

stabilized.

Site Code: 300-53 Classification: Accepted

Site Names: 300-53, Unplanned Release East Side of **ReClassification:** Closed Out (2/12/1999)

303-G

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:** 1996

Site The site was contaminated soil that was discovered on the surface of some slightly eroded soil **Description:** located within a posted Underground Radioactive Material (URM) Area. The actual erosion was

at the end of a concrete splash guard underneath the water discharge pipe. Disruption of the ground surface by the fire suppression system testing exposed sub-surface contamination that had

been previously covered with clean soil.

Waste Type:

Waste The waste was contaminated soil.

Description:

Site Code: 300-55 Classification: Accepted

Site Names: 300-55, 309 Rupture Loop Holding Tank, **ReClassification:** Rejected (2/12/1999)

Rupture Loop Hold-up Tank, RLT-2, 307-D

Storage Tank **Start Date:** 1960 **Site Type:**

Site Status: Inactive **End Date:**

The tank was an underground storage tank, 12.2 meters (40 feet) in diameter and 3.05 meters (10 Site

Description: feet) tall with a sloping top.

Waste Type: Equipment

Waste The waste was a tank.

Description:

Site Code: 300-56 Classification: Accepted

Site Names: 300-56, 306-E 90-Day Waste ReClassification: Rejected (1/27/1999)

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:
Site Status: Inactive End Date:

The site is a steel storage container designed to contain hazardous materials or waste. The site **Description:** was previously used as a 90 day waste storage area. The site is currently in use as a hazardous

material storage area. Materials currently stored include laboratory chemicals, a 208 liter (55 gallon) drum for waste oil recycling, and 320 kilograms (700 pounds) of peanut butter (sludge

simulant).

Waste Type: Misc. Trash and Debris

Waste The site received waste from the 306E building.

Description:

Site Code: 300-57 Classification: Accepted

Site Names: 300-57, 335 Building 90-Day Waste ReClassification: Closed Out (12/15/1998)

Accumulation Area

Site Type:Storage Pad (<90 day)</th>Start Date:1994Site Status:InactiveEnd Date:1998

Site The site is a small cinder block room addition on the west side of the 335 Building. The exterior

Description: door is locked and labeled "90 Day Storage Accumulation" and "Danger".

Waste Type: Equipment

Waste The 90 Day Waste Storage Accumulation Area was used to store sodium contaminated piping

Description: and components after dismantling, prior to shipment for disposal.

Site Code: 300-58 Classification: Accepted

Site Names: 300-58, 305B Steam Condensate Injection ReClassification: Rejected (9/2/1998)

Well, Miscellaneous Stream #449

Site Type: French Drain Start Date:

Site Status: Inactive End Date:

Site Status: Inactive End Date:

The site is a french drain, identified as miscellaneous stream #449. The unit is a concrete pipe that is flush with the ground surface, and filled with cobbles and sand. No pipes to the drain are visible. The "Inventory of Miscellaneous Streams". Povision 2 gays the site is inective, source.

visible. The "Inventory of Miscellaneous Streams", Revision 3 says the site is inactive, source

abandoned.

The french drain could also drain stormwater from nearby asphalt roads in very heavy rain. The original purpose of the site was likely to have been used for steam condensate. The soil and rocks are rust stained showing evidence of its use as a steam condensate drain. In addition, a steam line is located over the site. Although stormwater may enter the site, it is not necessarily conveyed to it.

Waste Type: Steam Condensate

Waste Description:

Site Code: 300-59 Classification: Accepted

Site Names: 300-59, 305 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #417

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well covered by a 1.29 meter (4.23 foot) metal lid. The lid is labeled

Description: "Confined Space." The lid is flush with the ground surface and is surrounded by soil and rocks. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source

abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-60 Classification: Accepted

Site Names: 300-60, 303A Building Steam Condensate, ReClassification: Rejected (2/12/1999)

Miscellaneous Stream #339, F.D. #26

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date:

Site The site is described as an injection well that receives steam condensate. This stream site is on

Description: the east side of the 303A Building, near the northeast corner. A condensate return pipe extends from the building at this point. The area next to the building was dug up when an electrical

system was installed, which would explain why there is no evidence of the site at this point. The "Inventory of Miscellaneous Streams," Revision 3, describes the site as active. However, the overhead steam line terminates and is capped at the north edge of the 3717B Building. 303A is posted "Radiation Area and Radioactive Material Area" and "Caution, Fissile Materials." The roof of 303A is posted "Contamination Area." 304 is posted "Fixed Contamination Area."

Waste Type: Steam Condensate

Waste When the site was active, the flow was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Site Code: 300-61 Classification: Accepted

Site Names: 300-61, 303B Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #444, Injection Well

#12

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site has been described as an injection well. No engineered structure is evident at the

Description: location described for this site. Two steam lines labeled HPD-TRP-011 and HPD-TRP-12 were

found; both are described in the "Inventory of Miscellaneous Streams," Revision 3. These two

lines descend from the overhead line and disappear into the ground. A third line from the overhead steam line is found just east of HPD-TRP-011 and -012. This third line is unlabeled and terminates open-ended approximately 10 centimeters (3.9 inches) above the base of the wooden pole that supports it. The ground surface in this area is covered by gravel. According to the "Inventory of Miscellaneous Stream," Revision 3, this site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

Site Code: 300-62 Classification: Accepted

Site Names: 300-62, 303C Building - Steam ReClassification: Rejected (9/2/1998)

Condensate, Miscellaneous Stream #495

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is two, 2.5 centimeter (1 inch) metal pipes from steam drain lines entering the ground at

Description: the base of the steam support structure. No engineered drain structure is visible. The

miscellaneous streams report (Revision 3) says the stream has been eliminated because the source has been shut off. The site received steam condensate from the main header, HRD-TRP-007, -

008.

Waste Type: Steam Condensate

Waste Description:

Site Code: 300-63 Classification: Rejected (9/2/1998)

Site Names: 300-63, 305B Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #458

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The site is a 0.6 meter (2 foot) diameter concrete french drain, 0.5 meters (1.5 feet) deep, with a **Description:** perforated steel plate cover, flush with the alley road. About 0.3 meters (1 foot) from the top is a

6 centimeter (3 inch) diameter drain pipe that goes toward the west. It is not clear if water drains out of this pipe to french drain, or out of french drain into this pipe when drain is full. Several steel lockers marked "Flammable Liquids" and "Poison" are adjacent to the south wall of building. They are each marked "empty," are on skids, and appear to have been moved to the

location for storage, not use. They do not appear to have leaked.

Waste Type: Stormwater Runoff

Waste Description:

Site Code: 300-64 Classification: Accepted

Site Names: 300-64, 303F Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #352

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site

Description:

The site is an HVAC steam condensate return to the WATS Pipe Trench (WIDS Site 300-224). The discharge goes into a rectangular concrete base covered by a 0.90 meter (2.95 foot) by 2.45 meter (8.04 foot) metal lid. Some of the concrete base appears to be rusty. The site is also surrounded by concrete. The lid is posted "Confined Space." There are three openings cut in the metal lid to allow pipes to pass through. An approximately 2.5 centimeter (1 inch) diameter metal pipe enters the middle opening. This pipe is labeled "P198" and appears to be electrical in nature. A second approximately 2.5 centimeter (1 inch) diameter metal pipe enters the south opening. There is a label on the wall next to this pipe that reads "NP-303F-01." This second pipe extends approximately 2 meters (6.6 feet) above the lid, makes a 90 degree turn away from 303F and terminates open-ended over one of the steam lines that enters the west wall of 303F. An approximately 10 centimeter (4 inch) diameter steam pipe and an approximately 2.5 centimeter (1 inch) diameter metal pipe enter the north opening. These two pipes extend down from the building's roof. According to John Remaize, the lines from the roof of 303F are HVAC and cooling lines. The lid does not fit tightly; there are openings between the lid and the concrete base. These openings could allow stormwater runoff from the 303F Building to enter. These opening also allow a limited view of the interior of the structure. Although it is difficult to see inside, the floor of the interior appeared to be dry during the October 29, 1998, walkdown. However, there also appeared to be more pipes inside than could be accounted for by those entering through the lid. Drawing H-3-304714, Sheet 2, shows the WATS and U-Bearing Pipe Trench (WIDS Site 300-224) enters/leaves WIDS Site 300-64 and connects to the 313 Building.

The site is on the east end of a row of removable panels labeled "Radioactive Material, Internally Contaminated." 303F is posted "Fixed Contamination Area" and the 303F roof is posted "Contamination Area." According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste The site has been listed as inactive in all earlier versions of the Miscellaneous Streams.

Description: Comments in earlier versions indicate the site has not been active for some time. No flow rate or

date for eliminating the source has been provided in any version of the Miscellaneous Streams

document.

Site Code: 300-65 Classification: Accepted

Site Names: 300-65, 303J Building - Steam Condensate ReClassification: Rejected (9/2/1998)

Mud Leg (Part of 300 Main Supply),

Miscellaneous Stream #266

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a 0.35 meter (14 inch) diameter steel pipe in the ground, about 0.8 meters (2.5 feet)

Description: deep. The drain is covered with a steel plate with notches and holes for vents and two steam

condensate pipes to enter. According to the miscellaneous streams report (Revision 3), the stream has been eliminated because the steam source has bee shut off. Signs on the 303J Building say

that it is a closed facility, and no material is stored inside.

Waste Type: Steam Condensate

Waste Description:

Site Code: 300-66 Classification: Accepted

Site Names: 300-66, 303J Building HVAC Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #267

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The site is an open concrete french drain. Two pipes exit from about the ceiling level of the 303J

Description: Building and discharge to the drain. The concrete drain is filled with sand and small rocks and it does not appear to have been used recently. The current "Inventory of Miscellaneous Streams",

Revision 3 lists the site as active as a steam condensate site. The responsible contractor believes

the site to be an HVAC condensate drain (as it was listed in the previous "Inventory of

Miscellaneous Streams", Revision 2).

Waste Type: Water

Waste Description:

Site Code: 300-67 Classification: Accepted

Site Names: 300-67, Steam Condensate from 300 Area ReClassification: Rejected (12/15/1998)

Main Steam Header, Miscellaneous Stream

#414

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well that received steam condensate. All that is visible of the site are the **Description:** two metal lids and the metal lid frame. The lid frame measures 1.90 meters (6.23 feet) by 0.82

meters (2.69 feet) and is flush with the ground surface. The site is just east of an access manhole for the process sewers, which is labeled "Radioactive Material, Internally Contaminated." The "Inventory of Miscellaneous Streams," Revision 2, states when this injection well was in service, it overflowed to the process sewer. The 303B Building is posted "Fissile Materials," "Radiation Area and Radioactive Material Area," and "Fixed Contamination Area." The roof of the 303B Building is posted "Contamination Area." The 304 Building is posted "Fixed Contamination Area." This site is slightly down slope of the road to the north. There are small openings in the lid where stormwater runoff from the road may be able to enter the injection well. It does not appear as though runoff from the two buildings would be inclined to flow towards the site; the area between the buildings and the site is fairly level. The site is surrounded by gravel. According to

the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-68 Classification: Accepted

Site Names: 300-68, 305 Building - Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #451, Pit U23

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The **Description:** is co

The site is an injection well. The base of the injection well is constructed of corrugated metal and is covered by a 1.91 meter (6.27 foot) metal lid. The lid is approximately 30 centimeters (11.8 inches) above grade and is labeled "U-23" and "Confined Space." Two pipes enter the lid from the overhead steam lines. One of these pipes is approximately 20 centimeters (7.9 inches) in diameter and the other is approximately 6 centimeters (2.4 inches) in diameter. The site is surrounded by soil and gravel. The "Inventory of Miscellaneous Streams," Revision 3, says the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-69 Classification: Accepted

Site Names: 300-69, 305 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #415

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site Description:

The site is an injection well covered by a 0.74 meter (2.43 foot) metal lid. The lid is flush with the ground surface and is surrounded by metal grating resting on top of the soil and gravel. A small diameter, less than 2.5 centimeters (1 inch), metal pipe elbow extends approximately 20 centimeters (8 inches) from the building approximately 5 centimeters (2 inches) above the ground surface. The other end of the pipe disappears into the ground. This pipe is in line with the injection well's lid. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-70 Classification: Accepted

Site Names: 300-70, 305 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #416

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

The site is an injection well covered by a 0.51 meter (1.67 foot) metal lid. The lid is flush with the ground surface and is surrounded by asphalt. A small diameter, less than 2.5 centimeters (1

inch), metal pipe elbow extends approximately 0.15 meters (0.5 feet) from the building approximately 0.15 meters (0.5 feet) above the ground surface. The other end of the pipe disappears into the ground. This pipe is in line with the injection well's lid. The area around the lid and between the lid and the building appears to have been excavated. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-71 Classification: Accepted

Site Names: 300-71, 306E Building - HVAC ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #454

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well that used to receive HVAC condensate. The injection well is constructed of concrete pipe and is covered by a 0.54 meter (1.77 foot) round metal lid with

handles. The top of the pipe rises approximately 4 centimeters (1.6 inches) above the ground surface. During the December 17, 1998, walkdown, the interior of the well appeared to be damp. This may have been due to condensation since there was condensation on the bottom of the lid. The well appears to be 20 centimeters (0.66 feet) deep with the bottom covered by cobbles. No pipes were visible entering the well. What appeared to be a black widow was living on the bottom side of the lid. The site is hidden behind an old air conditioning unit that is labeled "6" on its north side and SeasonCon on its south side. The site is surrounded by sand which has been discolored by garnet dust. According to the "Inventory of Miscellaneous Streams," Revision 3,

the site is inactive, source abandoned.

Waste Type: Water

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of HVAC condensate only.

Site Code: 300-72 Classification: Rejected (1/19/1999)

Site Names: 300-72, 308 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #404

Site Type:Injection/Reverse WellStart Date:Site Status:ActiveEnd Date:

Site The site is an injection well that receives stormwater runoff from the surrounding area. The site is covered by a 0.66 meter (2.17 foot) metal lid with perforations. The lid is flush with the

surrounding concrete. During the November 8, 1998, walkdown, water could be seen through the perforations in the lid. It had rained three days prior to the walkdown. Sand has washed down the truck ramp and has partially covered the lid. The "Inventory of Miscellaneous Streams," Revision 3, states "Disposal site within 300 feet of an active/inactive crib, ditch or trench." The site is

within 91 meters (300 feet) of 316-3 Trench.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.01 gallons per minute.

Site Code: 300-73 Classification: Rejected (1/19/1999)

Site Names: 300-73, 308 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #405

Injection/Reverse Well **Start Date: Site Type:**

Site Status: Active **End Date:**

Site The site is an injection well that received stormwater runoff from the surrounding area. The site is

> covered by a 0.18 meter (0.59 foot) metal grate. At the time of the November 8, 1998, walkdown, the site was surrounded by approximately 7 centimeters (2.8 inches) of sand and debris. The drain itself was also filled with sand and debris. It had rained three days prior to the walkdown. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The document also states "Disposal site within 300 feet of an active/inactive crib,

ditch or trench." The site is within 91 meters (300 feet) of 316-3 Trench.

Waste Type: Stormwater Runoff

Description:

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

minute) of stormwater only. **Description:**

Site Code: 300-74 **Classification:** Rejected (1/19/1999)

300-74, 308 Building Stormwater Runoff, **ReClassification: Site Names:**

Miscellaneous Stream #406

Site Type: Injection/Reverse Well **Start Date:** Inactive End Date:

Site Status:

The site is an injection well that received stormwater runoff. The site has a concrete base and is Site covered by a 0.64 meter (2.10 foot) by 0.64 meter (2.10 foot) metal grate. A sign on the grate **Description:**

reads "Drains to R.P.S." Sand and gravel cover part of the concrete surrounding the grate. The top of the concrete is flush with the ground surface on its south and west sides. The north side is approximately 1 to 5 centimeters (0.4 to 2 inches) above the ground surface. The east side of the concrete rises above the asphalt surface of the truck ramp. At the time of the November 8, 1998, walkdown, the site was filled with water and water had pooled in the adjacent truck ramp. It had rained three day's prior to the walkdown. According to the "Inventory of Miscellaneous Streams," Revision 3, the site has been grouted. It is inactive and listed as, "Disposal Site Permanently Abandoned." The document also states "Disposal site within 300 feet of an active/inactive crib,

ditch or trench." The site is within 91 meters (300 feet) of 316-3 Trench.

Waste Type: Stormwater Runoff

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of stormwater only.

Site Code: 300-75 **Classification:** Accepted

ReClassification: Rejected (1/19/1999) **Site Names:** 300-75, 309 Building Stormwater Runoff

#445, Injection Well #20

and Chiller Water, Miscellaneous Stream

Site Type: Injection/Reverse Well **Start Date: Site Status:** Inactive **End Date:**

Site The site is an injection well that received stormwater runoff and water from a chiller. The well is **Description:** a concrete pipe covered by a 1.11 meter (3.64 foot) diameter metal lid. The top of the pipe is

> approximately 2.5 centimeters (1 inch) above grade. The lid is labeled "Confined Space." The site is surrounded by yellow safety posts and asphalt. John Remaize stated that the chiller has

been removed. According to the "Inventory of Miscellaneous Streams," Revision 3, the drain has been permanently plugged and the stream has been routed to a process sewer. The document lists the site as inactive, "Source Permanently Abandoned."

Waste Type: Water

Waste The waste was stormwater runoff and chiller water. When the site was active, the flow rate was

Description: less than 0.038 liters (0.01 gallons per minute).

Site Code: 300-76 Classification: Accepted

Site Names: 300-76, 306W Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #418

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that is a concrete pipe almost flush with the ground surface. A 2.54

Description: centimeter (1 inch) metal pipe drops from an overhead steam line and drains to the unit. Adjacent

steam drain lines may also enter the unit, but any connecting pipes are below the rocks that come to within about 15.2 centimeters (6 inches) of the top of the drain. The drain is covered with a round steel plate with four vent holes and a notch for the metal pipe. The rocks appear to be discolored from rust. The "Inventory of Miscellaneous Streams", Revision 3, says the site is inactive, source abandoned. The site does not appear to be active, but discharge pipe(s) is (are)

still present (assuming adjacent pipes also discharge to the unit)

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-77 Classification: Rejected (1/19/1999)

Site Names: 300-77, 309 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #450

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date:

Site The site is an injection well that received stormwater runoff. It is located at the bottom of a covered stairwell. The drain is covered with a 26 centimeter (0.85 foot) by 21 centimeter (0.69

foot) metal grate and is surrounded by concrete. The stairwell is littered with wind borne debris. The "Inventory of Miscellaneous Streams," Revision 3, states that the drain has been permanently plugged. The document lists the site as inactive, "Source Permanently Abandoned." During the November 4, 1998, walkdown, the site appeared to be plugged; no outlet was visible. The site

was dry during this same walkdown.

Waste Type: Stormwater Runoff

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of stormwater only.

Site Code: 300-78 Classification: Accepted

Site Names: 300-78, 300 Area Main Header Steam Trap ReClassification: Rejected (2/12/1999)

(Southwest Corner of 313 Building),

Miscellaneous Stream #331

Site Type:Injection/Reverse WellStart Date:Site Status:ActiveEnd Date:

Site The site is a rectangular shaped below grade concrete box that is covered with two steel plates. **Description:** Seven pipes of various sizes enter the site from the 313 building. Standing water was observed

Seven pipes of various sizes enter the site from the 313 building. Standing water was observed in the bottom of the site. A concrete lined 6.7 meters long by 0.356 meters wide by 0.330 deep (22 feet long by 14 inches wide by 13 inches deep) trench extends from the site to the south. An opening at the south end of the trench was observed and may lead to the process sewer. This trench may be an overflow in the event the concrete box fills with water. Steel grating covers the top of the trench. A concrete pad surrounding the site is painted gray and posted as fixed

radiological contamination.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per **Description:** minute) of steam condensate only ("Inventory of Miscellaneous Streams"). This information

differs from that provided by John Remaize (Point of Contact). According to Mr. Remaize the

site received HVAC condensate.

Site Code: 300-79 Classification: Rejected (1/19/1999)

Site Names: 300-79, 313 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #457

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is a 1.14 meter (44 inch) diameter drywell that receives stormwater from six catch basins located to the south and the surrounding 313 Building Parking Lot area. The surrounding area is

located to the south and the surrounding 313 Building Parking Lot area. The surrounding area is paved with asphalt and there is no known contamination within the drainage area. The drywell is 1.4 meters (55 inches) deep and is constructed of corrugated steel pipe. Water was observed at

the bottom of the site.

Waste Type: Stormwater Runoff

Waste The "Inventory of Miscellaneous Streams", Revision 3, states that the flow rate is less than 1.9

Description: liters per minute (0.5 gallons per minute) of stormwater runoff only.

Site Code: 300-80 Classification: Accepted

Site Names: 300-80, 314 Building Stormwater Runoff **ReClassification:**

and Steam Condensate, Miscellaneous

Stream #268

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a square concrete structure adjacent to the 314 Building and next to a fenced stairway

Description: leading down. The site is covered by a steel plate marked with a sign "Radioactive material, internally contaminated." The site does not appear to be a stormwater drain. it is above the

surrounding grade and no drain pipes from the roof enter the site. The "Inventory of

Miscellaneous Streams", Revision 3, says the stream has been eliminated because the source has been permanently abandoned and rerouted to the process sewer.

The responsible contractor agrees that the site did previously receive steam condensate, but is unable to verify stormwater discharges. Further inspection under the steel cover and the review of facility drawings are required to verify the function and site type.

Waste Type: Steam Condensate

Waste DOE/RL-95/82, Revision 3 says that the site was used for stormwater runoff and steam **Description:** condensate. This site does not appear to be used for stormwater runoff, since it is above the

surrounding grade and no pipes from a roof enter the site. The stream was eliminated March,

1995 and rerouted to the process sewer.

Waste Type: Equipment

Waste The structure for this site appears to have become contaminated (see photograph).

Description:

Site Code: 300-81 Classification: Accepted

Site Names: 300-81, 321 Building Steam Condensate, ReClassification: Rejected (2/12/1999)

Miscellaneous Stream #370

Site Type: Injection/Reverse Well Start Date:
Site Status: Inactive End Date:

Site The drain is a 1.03 meter (3.3 foot) diameter concrete structure with a metal cover. The building

Description: source pipe is connected to the drain through the cover.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: UPR-300-4

Site Names: UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-82 Classification: Accepted

Site Names: 300-82, 321 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #371

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is a 1.04 meter (3.3 foot) diameter french drain with a metal cover. The drain is flush **Description:** with the ground. An overhead steam line runs north to south above the drain. The source piping

has been removed. The soil just north of the french drain is discolored with a rusty stain.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: UPR-300-4

Site Names: UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-83 Classification: Accepted

Site Names: 300-83, 321 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #372

Site Type: Injection/Reverse Well Start Date:
Site Status: Inactive End Date:

Site The site is a square concrete structure with a metal cover and labeled, F. D. #35. The concrete structure is raised 12.7 centimeters (5 inches) from the surrounding ground level. Inside the cover

is a pipe with a 12.7 centimeter (5 inch) diameter screen cover. The inside of the structure is dry and the pipe appears to be inactive. The concrete structure is 3.6 meters (12 feet) west of the

stormwater drain (site code 300-92) in front of the roll-up door.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: UPR-300-4

Site Names: UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-84 Classification: Accepted

Site Names: 300-84, 321 Building Vent Valve on Water ReClassification: Rejected (1/19/1999)

Line, Miscellaneous Stream #348

Site Type: Valve Pit Start Date:
Site Status: Inactive End Date:

Site The site is a 2.4 meter (8 foot) diameter, semicircular, steel caisson. It has a hatch opening

Description: marked "Confined Space". There are two valves at the bottom. The caisson is 2.2 meters (7.5

feet) deep. The site is marked "W-25" on the side of the caisson. One valve appears to be a main water shut off valve to the 321 building and the other is a drain valve. The 321 Building is

unoccupied.

Waste Type: Water

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: UPR-300-4

Site Names: UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-85 Classification: Accepted

Site Names: 300-85, 323 Building Steam Valve Pit, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #453

Site Type: Valve Pit Start Date:
Site Status: Active End Date:

Site The site is a 150 centimeter (60 inch) diameter vertical steel caisson with a sloping steel lid. An

Description: access door is located on the lid. The interior of the caisson contains several pipes and valves.

The site appears to be a valve pit. The site is posted as a confined space.

Waste Type: Water

Waste Description:

Site Code: 300-86 Classification: Accepted

Site Names: 300-86, 300 Area South Parking Lot ReClassification: Rejected (12/15/1998)

Stormwater Runoff, Miscellaneous Stream

#524

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Active End Date:

Site The site is a basin approximately 2 meters (6.6 feet) deep that collects stormwater from the main

Description: 300 area south parking lot. A lawn has been planted within the basin, and two inlet pipes are

visible at the northeast corner and the southeast corner of the site.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 18.75

Description: liters per minute (5 gallons per minute).

Site Code: 300-87 Classification: Rejected (1/19/1999)

Site Names: 300-87, 309 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #679

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a french drain that received stormwater runoff. It is located at the bottom of a covered stairwell and is surrounded by concrete. The site was covered by a 0.22 meter (0.72 foot) metal

stairwell and is surrounded by concrete. The site was covered by a 0.22 meter (0.72 foot) metal grate, which was sitting next to the site at the time of the November 4, 1998, walkdown. During this same walkdown, it was apparent that the stairwell roof was leaking during a rainstorm. The site appears to have been plugged; water was puddling in the stairwell. According to the

Hanford Site Waste Management Units Report

January 2004 970

"Inventory of Miscellaneous Streams," Revision 3, the site is inactive, "Source Permanently Abandoned." The document also states that the site has been permanently plugged.

Waste Type: Stormwater Runoff

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of stormwater only.

Site Code: 300-88 Classification: Accepted

Site Names: 300-88, 320 Building Irrigation Line ReClassification: Rejected (9/2/1998)

Effluent, Miscellaneous Stream #626

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a french drain that is constructed of concrete and covered with a steel lid.

Description:

Waste Type: Water

Waste The site receives irrigation water.

Description:

Site Code: 300-89 Classification: Accepted

Site Names: 300-89, 320 Building Irrigation Line **ReClassification:** Rejected (9/2/1998)

Effluent, Miscellaneous Stream #627

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain that is constructed of concrete and covered with a steel lid.

Description:

Waste Type: Water

Waste The site receives irrigation water.

Description:

Site Code: 300-90 Classification: Accepted

Site Names: 300-90, 320 Building Irrigation Line ReClassification: Rejected (9/2/1998)

Effluent, Miscellaneous Stream #628

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The french drain is constructed of concrete and covered with a steel lid.

Description:

Waste Type: Water

Waste The site receives irrigation water.

Description:

Site Code: 300-91 Classification: Accepted

Site Names: 300-91, 320 Building, Miscellaneous

Stream #350

ReClassification: Rejected (9/2/1998)

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The french drain is constructed of concrete and covered with a steel lid.

Description:

Waste Type: Water

Waste The site received irrigation water.

Description:

Site Code: 300-92 Classification: Accepted

Site Names: 300-92, 321 Building Stormwater Runoff, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #680

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The drain is a small, steel grate, measuring 0.38 meters by 0.38 meters (1.25 foot by 1.25 foot).

Description: The drain is plugged with dirt.

Waste Type: Stormwater Runoff

Waste The "Inventory of Miscellaneous Streams", Revision 3, states that the flow rate is less than 0.038

Description: liters per minute (0.01 gallons per minute) of stormwater runoff only.

The Site Was Consolidated With:

Site Code: UPR-300-4

Site Names: UPR-300-4, UN-300-4, Contaminated Soil Beneath the 321 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-93 Classification: Rejected (1/19/1999)

Site Names: 300-93, 324 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #354

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is a 0.65 meter by 0.47 meter (2.1 foot by 1.5 foot) grate in the asphalt parking area on

Description: the south side of the 324 Building. It is 3 meters (10 feet) south of the lawn.

Waste Type: Stormwater Runoff

Waste When the site was active, the flow rate was less than 0.19 liters per minute (0.05 gallons per

Description: minute) of stormwater runoff only.

Site Code: 300-94 Classification: Rejected (1/19/1999)

Site Names: 300-94, 324 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #711, 300-234

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site Description:

The site is a network of a drywell and a catch basin network installed to eliminate flooding on the east side of the 324 building. The drain and the catch basin are subsurface structures and are not visible. A 0.63 by 0.53 meter grate is visible in the gravel near the northeast corner of the 324 Building. The building escort for the 10-26-98 site visit pointed out that there is an identical grate at the southeast corner of the building, with a concrete trough leading to it to help direct water flow. The second grate is approximately 9 meters (30 feet) south of the one on the northeast corner. The two grates are in line with each other, parallel to the east side of the building. A PVC inlet and outlet pipe is visible through the grates. The two grates appear to be connected and are assumed to be stormwater collection points for the drainage system.

Waste Type: Stormwater Runoff

Waste The "Inventory of Miscellaneous Streams", Revision 3, states that the flow rate is less than 0.79

Description: liters per minute (0.20 gallons per minute) of stormwater only.

Site Code: 300-95 Classification: Accepted

Site Names: 300-95, 324/336 Buildings Stormwater ReClassification: Rejected (1/19/1999)

Runoff and Steam Condensate; Miscellaneous Stream #425

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a french drain that receives stormwater runoff and steam condensate. All that can be seen of the site is an inset, 1.37 meter (4.49 foot) diameter, thin metal cover or lid. This cover is

seen of the site is an inset, 1.37 meter (4.49 foot) diameter, thin metal cover or lid. This cover is inset in a round concrete pad and appears to be bolted onto an underlying grate. The site is labeled "Confined Space." The site and concrete pad are higher in elevation than the surrounding gravel. No incoming or nearby pipes were visible during the November 20, 1998, walkdown.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow for stormwater

Description: runoff and steam condensate is less than 0.05 gallons per minute.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow for stormwater

Description: runoff and steam condensate is less than 0.05 gallons per minute.

Site Code: 300-96 Classification: Accepted

Site Names: 300-96, 325 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #707

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is a 132.1 centimeter (52 inch) diameter french drain constructed of concrete and covered

Description: with a steel lid. A 3.8 centimeter (1.5 inch) diameter pipe extends from the west wall of the 325

building to the french drain.

Waste Type: Steam Condensate

Waste Description:

Site Code: 300-97 Classification: Rejected (9/2/1998)

Site Names: 300-97, 325 Building Stormwater Runoff **ReClassification:**

and Fire System Testing Water, Miscellaneous Stream #706

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site The site is a drain that is covered by a rusted perforated steel plate, 0.46 meters (1.5 feet) square.

Description: The site drains a small asphalt pad and a pipe coming out of bottom of the fire system shed. The

drain cover plate appears to be sealed to the asphalt. Therefore, it was not possible to determine

the depth of the site.

Waste Type: Stormwater Runoff

Waste Description:

Site Code: 300-98 Classification: Rejected (9/2/1998)

Site Names: 300-98, 325 Building South Stairwell **ReClassification:**

Drain, Miscellaneous Stream #264, 300-229

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a 12.7 centimeter (5 inch) square floor drain at the bottom of a stairwell that drains

Description: stormwater from a leaky roof.

Waste Type: Stormwater Runoff

Waste The site receives less than 0.038 liters (0.01 gallons) per minute of stormwater runoff.

Description:

Site Code: 300-99 Classification: Accepted

Site Names: 300-99, 325 Building Nitrogen Tank ReClassification: Rejected (9/2/1998)

Blowdown Miscellaneous Stream #265,

Injection Well #399-3

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is not visible without entering the confined space under the compressed gas storage loading dock. The loading dock has skirting around it, and therefore, the site is not visible. A

limited field walkdown was performed for this site. No access could be gained to the site.

Waste Type: Water

Waste The site received condensate blowdown from a liquid nitrogen tank. The tank has been removed.

Description:

Site Code: 300-100 Classification: Rejected (9/2/1998)

Site Names: 300-100, 325 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #408

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site drains stormwater from the chiller pad to the ground. The drain is covered with a 68.6

Description: centimeter by 61 centimeter (27 inch by 24 inch) steel grate. The site is 22.9 centimeters - 25.4

centimeters (9 inches - 10 inches) deep and contains water just below the grating.

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 300-101 Classification: Accepted

Site Names: 300-101, 326 Building Stormwater Runoff ReClassification: Rejected (9/2/1998)

and Steam Condensate, Miscellaneous

Stream #409

Site Type: Depression/Pit (nonspecific) Start Date:

Site Status: Active End Date:

Site The site is a roadway drain, with a 0.4 meter by 0.5 meter (1.3 foot by 1.7 foot) rectangular **Description:** perforated steel cover. The cover is visible, but the structure is full of sand and gravel. The site

drains stormwater from a loading dock and a large area of asphalt parking apace. A steel pipe 3.7 meters (12 feet) away, on the side of the building, appears to be the steam condensate drain. Next

to this pipe is a lock box that is marked with a "Radioactively controlled area" sign.

The steam condensate component for this site has been routed to the sanitary sewer. According to the "Inventory of Miscellaneous Streams", Revision 3, the site is active for stormwater only.

The disposal structure is a non-engineered structure.

Waste Type: Stormwater Runoff

Waste is also reported to be steam condensate. Lock box next to possible steam condensate line

Description: is marked with a warning sign: "Radioactively controlled area." The materials loaded at the

loading dock are unknown, but no spills or unplanned releases are known.

Site Code: 300-102 Classification: Accepted

Site Names: 300-102, 328 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #353

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well that received steam condensate. The injection well is a 96 centimeter **Description:** (38 inch) diameter structure with a heavy metal cover that has four holes in it. It is flush with the

(38 inch) diameter structure with a heavy metal cover that has four holes in it. It is flush with the gravel surface surrounding it. According to the "Inventory of Miscellaneous Streams," Revision

3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-103 Classification: Rejected (9/2/1998)

Site Names: 300-103, 329 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #422

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a storm drain covered with a 63.5 centimeter by 45.7 centimeter (25 inch by 18 inch)

Description: steel grating that drains stormwater from the surrounding area. There are no contamination

postings near the site.

Waste Type: Stormwater Runoff

Waste Description:

Site Code: 300-104 Classification: Rejected (9/2/1998)

Site Names: 300-104, 329 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #546

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a storm drain covered with a 63.5 centimeter by 45.7 centimeter (25 inch by 18 inch)

Description: steel grating that drains stormwater from the surrounding area. There are no contamination

postings near the site.

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 300-105 Classification: Accepted

Site Names: 300-105, 331 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #513, Pit U1

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a steam pit. Several shut off valves are visible and a hatch cover provides access to the

Description: site. All locks have been removed from the valves.

Wasta Tyna Steam Condensate

waste type. Steam Condensate

Waste

Description:

Site Code: 300-106 Classification: Accepted

Site Names: 300-106, 331 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #574

Site Type: French Drain Start Date:

Site Status: Inactive End Date:

Site The site is a drain line (not an injection well) that drains stormwater and possibly steam

Description: condensate from what appears to be a steam pipe near the drain. The site is not an injection well

or a french drain. Water level in the drain was observed just below the top of the grating.

Waste Type: Steam Condensate

Waste

Description:

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 300-107 Classification: Rejected (9/2/1998)

Site Names: 300-107, 331 Building Stormwater Runoff,

Miscellaneous Stream #447, Injection Well

#32

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete and covered with a steel lid. The drain has two

Description: 10.2 centimeter (4 inch) diameter pipes entering the drain at the bottom. Presumably, the site

drains stormwater from drains located near two nearby entrances to the 331 building.

ReClassification:

Waste Type: Stormwater Runoff

Waste

Description:

Site Code: 300-108 Classification: Rejected (9/2/1998)

Site Names: 300-108, 331 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #448, Injection Well

#37

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a stormwater french drain that drains the surrounding paved area and roof drains from

Description: the 331 building at a low point. There is no known contamination within the drainage area.

Waste Type: Stormwater Runoff

Waste Description:

Site Code: 300-109 Classification: Accepted

Site Names: 300-109, 333 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #455

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The Inventory of Miscellaneous Streams Report states the injection well is below grade. It also **Description:** states it is labeled SS-2 in report WHC-SD-L125-ES-001. A site visit on 10-26-98 could not

visually identify any surface features resembling a drain north of the 333 Building. The site was revisited on 11-11-98 with a facility representative. A white PVC pipe emerges laterally from the asphalt in the approximate location described in the Inventory of Miscellaneous Streams Report. There is a channel cut in the asphalt that runs north to the 300 Area perimeter fence. There is visual evidence of water runoff in the channel, but no french drain structure is apparent. John Remaize believes that a drain at the northeast side of the building could feed into a buried french

drain.

Waste Type: Stormwater runoff

Waste The "Inventory of Miscellaneous Streams", Revision 3, states that the site receives less than 1.9

Description: liters per minute (0.50 gallons per minute) of stormwater runoff only.

Site Code: 300-110 Classification: Accepted

Site Names: 300-110, 333 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #456

Site Type:Injection/Reverse WellStart Date:Site Status:ActiveEnd Date:

Site The site is a 0.41 meter diameter drain with a metal grate labeled "Internal Radioactive

Description: Contamination" due to its proximity to the WIDS Site 618-1 Burial Ground. The drain has a dirt

bottom that is approximately 0.61 (2 feet) below the surface of the asphalt and an overflow line

that drains to the process sewer.

Waste Type: Stormwater Runoff

Waste The "Inventory of Miscellaneous Streams", Revision 3, lists the flow rate as less than 1.9 gallons **Description:** per minute (0.50 gallons per minute). This document lists the stream as containing stormwater

only. The disposal structure is labeled as being internally contaminated.

Site Code: 300-111 Classification: Rejected (9/2/1998)

Site Names: 300-111, 337 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #516

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site **Description:** The site is a french drain; a round concrete pipe 0.7 meters (2.25 feet) in diameter, at least 1.2 meters (4 feet) deep. Water covers the bottom, so the total depth was not determined. The site drains stormwater from the asphalt alley way used to access the trash and recycled cardboard pickup containers, and provide pedestrian access to the 337 Building. The miscellaneous streams report says this site is a "non-engineered structure" and "deleted" but it does not appear to be either case.

Waste Type: Stormwater Runoff

Waste Site receives only stormwater runoff.

Description:

Site Code: 300-112 **Classification:** Accepted

Site Names: 300-112, 340 P-3 Pump Pit, Retention **ReClassification:** Rejected (1/15/1999)

> Process Sewer Pump Pit #3 French Drain, Miscellaneous Stream #428

Site Type: Injection/Reverse Well **Start Date:**

1996 **Site Status:** Inactive **End Date:**

Site The Pump Pit is an engineered structure with an entry hatch labeled "Non-Permit Confined Space". The drain is at the bottom of the pit. It has a perforated, circular cover that measures **Description:**

approximately 0.61 meters (2 feet) in diameter. The pumps and piping have been removed.

Waste Type: Water

Waste When the site was active, it received flush water drainage and pump leakage. The source of the **Description:**

water was uncontaminated potable water. The flow rate was less than 0.038 liters (0.01 gallons)

per minute.

Site Code: 300-113 **Classification:** Accepted

Site Names: 300-113, 340 Building Steam Condensate/ **ReClassification:** Rejected (1/15/1999)

Water Heater Overflow, Miscellaneous

Stream #341

Site Type: Injection/Reverse Well **Start Date:**

1996 **Site Status:** Active End Date:

Site The drain is a 0.46 meter (18 inch) diameter metal pipe that extends slightly above grade. A 1.3 **Description:**

centimeter (0.5 inch) diameter pipe exits the building wall and terminates over the drain. The pipe is connected to a water heater overflow valve, that is inside the 340 Building. Before the

steam utility was removed from the building, the drain received steam condensate.

Waste Type: Steam Condensate

Waste The site received steam condensate before the steam was shut off in the building. When the site **Description:** was active (steam condensate), the flow rate was less than 0.038 liters (0.01 gallons) per minute.

Currently, the site is set up to receive overflow from the water heater located inside the 340 Building. The flow rate for this activity is unknown. The effluent from the water heater is

nondangerous/nonradioactive potable water.

Site Code: 300-114 Classification: Accepted

Site Names: 300-114, 340A Building Steam ReClassification: Rejected (1/15/1999)

Condensate, Miscellaneous Stream #427

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site Currently, there are no visual surface features. The drain area was backfilled with clean gravel when the steam system was removed from the building. The gravel over the drain is slightly

darker than the other gravel in the area.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters (0.01 gallons) per minute of steam

Description: condensate.

Site Code: 300-115 Classification: Rejected (1/15/1999)

Site Names: 300-115, 340B Building Backflow **ReClassification:**

Preventer Emergency Drain, Miscellaneous

Stream #426

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site Currently, there are no visible surface features. The drain was covered with clean gravel when the

Description: source was abandoned in 1996. The gravel over the drain is slightly darker than the other gravel

in the area.

At least some component of the structure has been removed. The gravel would not cover the height of the exposed part of the structure. It may be that the lip of the structure was knocked into

the drain or the entire drain may have been removed.

Waste Type: Water

Waste The drain would have received nondangerous/nonradioactive (potable) water in the event of a

Description: failure of the service water backflow preventer. There has been no known failure of the

backflow preventer. Thus, this site would not have received any discharge.

Site Code: 300-116 Classification: Accepted

Site Names: 300-116, 3506A Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #381

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a french drain that is covered by a 0.48 meter (1.57 foot) by 0.48 meter (1.57 foot)

Description: square metal lid. This french drain appears to be constructed of concrete. The top is slightly

depressed relative to the surrounding gravel. A pipe from the overhead steam line enters the ground nearby. The pipe is labeled "HPD-TRP-057." According to the "Inventory of

Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-117 **Classification:** Accepted

Site Names: 300-117, 3506A Building Steam **ReClassification:** Rejected (12/15/1998)

Condensate, Miscellaneous Stream #382

French Drain **Start Date: Site Type:**

Inactive **End Date:** 1998 **Site Status:**

Site The site is a french drain that is constructed of concrete. The top of the drain is flush with the **Description:** ground surface and is covered by two metal lids. Both lids are labeled "Confined Space." The

west lid has a label saying "U-58." The east lid had "U58" written on it. A metal pipe, 0.1 meters (0.3 feet) in diameter and 0.24 meters (0.79 feet) in length, extends vertically from the west lid. This metal pipe appears to be a vent. It does not appear to extend into the cavity of the french drain. Two pipes from the overhead steam line enter the ground nearby. This site is surrounded by gravel and a metal safety barricade. According to the "Inventory of Miscellaneous Streams,"

Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-118 **Classification:** Accepted

300-118, 3621D Building Steam ReClassification: Rejected (12/15/1998) **Site Names:**

Condensate, Miscellaneous Stream #700,

Pit U-7.

Site Type: Valve Pit **Start Date:**

1998 **Site Status:** Inactive **End Date:**

Site

The site is a valve pit with a dirt floor. Steam condensate was discharged onto the floor of the pit. The pit has a square concrete base. It is at the bottom of a slope so the top of the concrete **Description:**

base ranges from 21 to 35 centimeters (8.3 to 13.8 inches) above the ground surface. The valve pit is covered by an inset, square metal lid that is 0.81 meters (2.66 feet) by 0.81 meters (2.66 feet). The lid is labeled "Confined Space" and "U-7." Three valves are visible nearby (MSS-V-337, MSS-V-030 and HPD-V-3041A). Two pipes approximately 3.5 centimeters (1.4 inches) in diameter extend from the concrete base, one on the south side and one on the west side. These two pipes then make a 90 degree turn and enter the ground. During the site walkdown, a ladder, pipes and valves were visible inside the drain. Condensation was visible on the bottom of the lid and moisture was visible on the pipes and valves inside the pit and closest to the lid. At least three valves and five pipes were observed inside the structure. Also visible was an underground area that opens up to the east of the inlet. According to the "Inventory of Miscellaneous

Streams," Revision 3, the site is inactive, source abandoned.

Steam Condensate **Waste Type:**

When the site was active, it received less than 0.38 liters per minute (0.1 gallons per minute) of Waste

steam condensate only. **Description:**

Site Code: 300-119 Classification: Accepted

Site Names: 300-119, 3621D HVAC Condensate, **ReClassification:** Rejected (12/15/1998)

> Miscellaneous Stream #401, 3621D Air/Condensate Blowdown Drain

Site Type: Injection/Reverse Well **Start Date: Site Status:** Active **End Date:**

The drain is an open corrugated metal pipe filled with rocks. The source pipe exits the building Site

Description: wall and has a 90 degree elbow to connect the pipe to the french drain. The building wall and the

french drain rocks are stained with rust.

Waste Type: Water

Waste According to the "Inventory of Miscellaneous Streams", Revision 3, the site has potentially **Description:**

received hydrocarbons. The report documented the flow rate as less than 0.038 liters per minute

(0.01 gallons per minute).

300-120 **Site Code: Classification:** Accepted

Site Names: ReClassification: Rejected (12/15/1998) 300-120, 3621D Building Diesel Generator

> Cooling System Condensate, Miscellaneous Stream #402, 3621D Air Driven Starter

Motor Discharge Drain

Site Type: Injection/Reverse Well **Start Date: End Date: Site Status:** Active

The site is a 0.9 meter (2.9 feet) diameter concrete structure with a metal grate cover. The unit is Site

filled with rocks. Four pipes, one for each air starter motor, exit the west wall of the 3621D **Description:**

> building near the foundation. The pipes tee into a larger aboveground line that runs south, parallel to the building wall. The line elbows to the west and then down where it is attached to the grate.

The grate and the rocks are stained with a black, oily substance.

Waste Type: Water

The site receives air and small amounts of condensate from the air starter motors in the 3621D Waste

Description: Building. The air and condensate may contain small quantities of oil.

300-121 **Site Code: Classification:** Accepted

Site Names: 300-121, 3621D Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #403,

Injection Well #26

Site Type: French Drain **Start Date: Site Status:** Inactive **End Date:**

Site The site is a french drain with a concrete base. The site is on a slope so the top of the drain rises

between 8 to 27 centimeters (3.1 to 10.6 inches) above the ground surface. Approximately 20 **Description:**

centimeters (7.9 inches) from its top, the drain starts to narrow. The drain is covered by a 1.37 meter (4.49 foot) metal lid. The lid appears to fit flush with the concrete base. The lid is labeled "Confined Space" and has "FD 26" written on it. The site is surrounded by sandy soil and rocks.

Waste Type: Water

Waste The site received condensate from the air receivers inside the 3621D Building. It may also have

Description: received any spills that reached the floor drains. There is a potential for contamination from

petroleum and from ethylene glycol.

Site Code: 300-122 Classification: Accepted

Site Names: 300-122, 366 Building Fuel Oil Bunker ReClassification: Rejected (12/15/1998)

Loading Station Steam Condensate,

Miscellaneous Stream #344

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

The site is a french drain that received steam condensate from the 366 Building fuel oil bunker loading station. Only a small portion of the french drain's pipe is exposed. It could not be

ascertained whether the pipe was composed of clay or discolored concrete. The drain is covered with a 0.65 meter (2.13 foot) rusted metal cover and the soil and gravel surrounding the site appears to be discolored by rust. The top of the lid is 5 to 8 centimeters (2 to 3.1 inches) above ground surface. There are also granular ash deposits on the ground in the general area east /northeast of the 384 powerhouse. The ground surface surrounding the site is slightly depressed which could allow the pooling of stormwater. The site is less than a meter (3.3 feet) south of a line of posts labeled "Radiologically Controlled Area" that appears to surround the 3715 and 303E buildings. LPD-TRP-053, -057 and -058 are on a concrete pad at the northwest corner of the 366 Building. There is a black, tar-like residue on this pad. According to the "Inventory of Miscellaneous Streams," Revision 3, there was a potential for fuel oil to contaminate the

discharge. The document also states the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the site has the potential to **Description:** be contaminated with fuel oil. When this site was active, the flow rate was less than 0.38 liters

per minute (0.1 gallons per minute).

DynCorp has reviewed the site and stated the following. The dark stains in the photo appear to correlate to coal powder left over from the powerhouse. There were small piles of this material throughout the area. There was a potential for runoff of fuel oil because of the proximity of the fuel bunkers. However, no fuel oil stained soil was observed near the drain and there is no

evidence of discharges to this site.

Site Code: 300-123 Classification: Accepted

Site Names: 300-123, 366 Building Fuel Oil Bunker **ReClassification:**

Loading Station Steam Condensate,

Miscellaneous Stream #342

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate from the 366 Building fuel oil bunker

Description: loading station. The french drain is a metal culvert that is covered with a 0.69 meter (2.25 foot)

diameter diamond plate metal cover with four 1.9 centimeter (0.75 inch) holes in the cover. The lid is discolored by rust. Inside the french drain, there is soil and rock about 1.4 meters (4.5 feet) from the top of the culvert. There are also granular ash deposits on the ground in the general area

east northeast of the 384 powerhouse. The south side of the lid is flush with the ground surface and approximately 5 centimeters (2 inches) above the ground surface on the north side.

Stormwater could collect on the north side of the site. During the November 3, 1998, walkdown, there was water inside the drain. There had been rain the day of the walkdown and during the previous week. The site is on the edge of an area posted "Radiologically Controlled Area" that appears to surround the 3715 and 303E buildings.

According to the "Inventory of Miscellaneous Streams," Revision 3, there was a potential for fuel oil to contaminate the discharge. An approximately 2.5 centimeter (1 inch) diameter pipe enters the drain from the south side in line with where LPD-TRP-055 and -056 used to be. An approximately 1.3 centimeter (0.5 inch) diameter pipe enters the southeast side of the drain. The "Inventory of Miscellaneous Streams," Revision 3, also states the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste **Description:** According to the "Inventory of Miscellaneous Streams," Revision 3, the site has the potential to be contaminated with fuel oil. When this site was active, the flow rate was less than 0.038 liters

per minute (0.01 gallons per minute).

As part of the DynCorp review, Michelle Gunter was contacted. She recalled a spill to one of the injection wells. Documentation was found for a small spill (less than one gallon) into injection well #342 (300-123). Historical documentation for changes to the "Inventory of Miscellaneous Steams" was reviewed. It was found that streams 653 (300-124), 342, and 344 (300-122) all have the same comment. This may be a mistake in the report. No evidence of discharges to streams 653 and 344 have been found.

Site Code: 300-124 **Classification:** Accepted

300-124, 366 Building Fuel Oil Bunker **ReClassification:** Rejected (12/15/1998) **Site Names:**

Steam Condensate, Miscellaneous Stream

#653

Site Type: French Drain **Start Date:**

1998 **Site Status:** Inactive **End Date:**

Site **Description:** The site is a french drain that received steam condensate from steam lines on top of the 366 Building fuel oil bunker. The french drain's metal cover is the only part of the site that is visible; it is 0.33 meters (1.08 foot) in diameter. The top of the cover is approximately 5 centimeters (2 inches) above the ground surface. There is a slight depression on the southwest side of the site where stormwater could collect. The gravel and soil surrounding the site appears to be discolored by rust. LPD-TRP-054 is on a concrete pad by the southwest corner of 366 Building. There is a black, tar-like residue on this pad. According to the "Inventory of Miscellaneous Streams," Revision 3, there was a potential for fuel oil to contaminate the steam condensate. The document also states the site is inactive, source abandoned.

Waste Type: Steam Condensate

According to the "Inventory of Miscellaneous Streams," Revision 3, there is a potential for fuel Waste **Description:**

oil to contaminate the steam condensate. When this site was active, the flow rate was less than

0.038 liters per minute (0.01 gallons per minute).

DynCorp has reviewed the site and stated the following. The dark stains in the photo appear to correlate to coal powder left over from the powerhouse. There were small piles of this material throughout the area. There was a potential for runoff of fuel oil because of the proximity of the fuel bunkers. However, no fuel oil stained soil was observed near the drain and there is no evidence of discharges to this site.

Site Code: 300-125 Classification: Accepted

Site Names: 300-125, 3702 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #346

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The site was a french drain that collected steam condensate. The previous location for the 3702

Description: Building is currently a cobble-covered field. No evidence of the site remains. According to the

"Inventory of Miscellaneous Streams," Revision 3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-126 Classification: Accepted

Site Names: 300-126, 3703 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #431

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site was a french drain that collected steam condensate. The previous location of the 3703

Description: Building is currently a cobble and gravel covered field. No evidence of a french drain was visible

during the site walkdown. According to the "Inventory of Miscellaneous Streams," Revision 3,

the site is inactive, source permanently abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-127 Classification: Rejected (12/15/1998)

Site Names: 300-127, 3705 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #410

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a french drain located in a soil and gravel covered area. Nearby, a roof drain pipe can be seen extending down the outer wall of the 3705 Building into the ground. According to the

"Inventory of Miscellaneous Streams," Revision 3, this french drain does not have surface access.

No drain was visible during the site walkdown.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-128 Classification: Rejected (12/15/1998)

Site Names: 300-128, 3705 Building Stormwater

Runoff, Miscellaneous Stream #411

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1997

Site The site is a french drain that collected stormwater runoff. According to the "Inventory of

Description: Miscellaneous Streams," Revision 3, the stream is "Not Active" and the "Disposal Site Permanently Abandoned." A roof drain was visible nearby which appeared to enter the 3705

Building; however, no french drain was visible during the site walkdown that could be associated

ReClassification:

ReClassification:

with this roof drain.

Waste Type: Stormwater Runoff

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of stormwater runoff.

Site Code: 300-129 Classification: Rejected (12/15/1998)

Site Names: 300-129, 3705 Building Stormwater

Runoff, Miscellaneous Stream #412

Site Type: French Drain Start Date:
Site Status: Active End Date:

The site is a french drain located in a cobble-covered area. A roof drain is visible nearby.

Description: According to the "Inventory of Miscellaneous Streams," Revision 3, this french drain does not

have surface access. No drain was visible during the site walkdown.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters per minute (0.01 gallons per minute).

Site Code: 300-130 Classification: Rejected (12/15/1998)

Site Names: 300-130, 3705 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #413

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain that collects stormwater runoff. A roof drain is visible nearby.

Description: According to the "Inventory of Miscellaneous Streams," Revision 3, the french drain does not

have surface access. No drain was visible during the site walkdown.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters per minute (0.01 gallons per minute).

Site Code: 300-131 Classification: Accepted

Site Names: 300-131, 3706 Fire Sprinkler System **ReClassification:** Rejected (1/19/1999)

Water, Miscellaneous Stream #515

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site The site is a french drain that is the discharge point for fire sprinkler system water. The drain is a **Description:** clay pipe with the outer diameter of 0.42 meters (1.38 feet) and is not covered by a lid. The top of

clay pipe with the outer diameter of 0.42 meters (1.38 feet) and is not covered by a lid. The top of the clay pipe is above grade except where moss is encroaching. The pipe appears to be filled with cobbles and rocks to within 0.3 meters (0.98 feet) of its top. The rocks and cobbles inside the drain appear rusty. Above the site are two capped metal ports labeled "Fire Department Connection." Below these ports, two metal pipes extend from the building and terminate with open ends above the drain. One of these pipes is approximately 5 centimeters (2 inches) in diameter and the other is approximately 2 centimeters (0.8 inches) in diameter. During the October 26, 1998, walkdown, an opening in the side of the building for a third pipe was observed; this opening has not been plugged. The site is surrounded by sand, gravel and moss. The south

October 26, 1998, walkdown, an opening in the side of the building for a third pipe was observed; this opening has not been plugged. The site is surrounded by sand, gravel and moss. The south side of the drain abuts the 3706 Building, which is posted "Fixed Contamination Area." The site falls within WIDS site 300-46 which estimates the extent of extensive uranium, transuranic and

chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Water

Waste The site receives drainage from the fire sprinkler system at a rate of less than 3.8 liters per **Description:** minute (1 gallon per minute). Fire sprinkler water is exempt from permitting. However, based on the fire sprinkler water is exempt from permitting.

minute (1 gallon per minute). Fire sprinkler water is exempt from permitting. However, based on past practice activities at the 3706 Building and potential releases to the soil column, the disposal structure and soil should be surveyed to determine if radioactive contamination is

present. The disposal structure is immediately adjacent to the 3706 Building.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-132 Classification: Accepted

Site Names: 300-132, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #368

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been described as a french drain that received steam condensate. During the

Description: November 18, 1998, walkdown, there did not appear to be an engineered structure at the site's

location. The site appears to be a rock and cobble filled depression next to the 3706 Building. The depression is surrounded by soil-covered asphalt. The rocks and cobbles in the depression as well as the side of the 3706 Building appear to be rust stained. On the south side of Door #02, an approximately 10 centimeter (4 inch) diameter metal pipe exits the east side of the 3706

Building, turns and enters the ground. Forty centimeters (1.3 feet) to the east of this pipe is a concrete structure with a 0.66 meter (2.17 feet) by 0.66 meter (2.17 feet) metal cover. In addition to steam condensate, the site also appears to have received fire sprinkler system water. Four metal pipes terminate over the depression. Three of these four pipes exit the east side of the 3706 Building near a Fire Department Connection. An approximately 2 centimeter (0.8 inch) diameter metal pipe extends from the building 0.95 meters (3.1 feet) above the ground surface; an approximately 6 centimeter (2.4 inch) diameter metal pipe extends from the building 0.90 meters (3 feet) above the ground surface and an approximately 4 centimeter (1.6 inch) metal pipe extends from the building 0.8 meters (2.6 feet) above the ground surface. These three pipes terminate open-ended over the depression. The fourth pipe is approximately 8 centimeters (3.1 inches) in diameter and exits the building 3 to 4 meters (9.8 to 13.1 feet) above the ground surface. It could not be ascertained whether this pipe is still open or whether it had been plugged. There is a Ushaped section of 8 centimeter (3.1 inches) pipe attached to the east wall of the 3706 Building just below the Fire Department Connection; this section of pipe has open ends. According to John Remaize, the steam and fire water for the building are still active. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-133 Classification: Accepted

Site Names: 300-133, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #367, Injection Well

#27

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that used to receive steam condensate. The drain has a square concrete **Description:** base with a 0.66 meter (2.17 foot) by 0.66 meter (2.17 foot) metal lid. What appear to be rust

base with a 0.66 meter (2.17 foot) by 0.66 meter (2.17 foot) metal lid. What appear to be rust stains are on the lid and surrounding concrete. The remains of "FD 27" written in paint can be seen on the side of the building next to the site. There is also writing on the metal lid but it is illegible due to age. Two metal pipes, both approximately 3.5 centimeters (1.4 inches) in diameter, extend from the east side of the 3706 Building and enter the lid. A metal pipe elbow extends from the ground between the site and 3706. This pipe is approximately 5 centimeters (2 inches) in diameter and terminates open ended. A third steam pipe extends from the east side of the 3706 Building approximately 2.5 meters (8.2 feet) north of the site. This pipe terminates approximately 0.5 meters (1.6 feet) above the ground surface and appears to have been plugged. The site is surrounded by concrete and sand. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source

abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-134 Classification: Accepted

Site Names: 300-134, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #362

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain has a concrete base and is

Description: covered by a 0.66 meter (2.17 foot) by 0.66 meter (2.17 foot) metal lid. The site is surrounded by gravel and weeds. An approximately 2.5 centimeter (1 inch) diameter metal pipe extends from the cost well of the country and makes a 90 degree turn and enters the ground approximately 0.5

the east wall of the courtyard, makes a 90 degree turn and enters the ground approximately 0.5 meters (1.6 feet) from the site. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium,

transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-135 Classification: Accepted

Site Names: 300-135, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #365

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain is a clay pipe that abuts the

Description: north wall of the 3706 Building. The top of the clay pipe ranges from 2 to 4 centimeters (0.8 to

1.6 inches) above the ground surface, except on its southwest side where the pipe is broken. Stormwater runoff may be able to enter the drain through this break. The drain is covered by a

0.77 meter (2.53 foot) metal lid with two handles and an opening that could allow condensate pipes to enter. Any lines that may have entered the drain have been removed; no lines were visible during the November 20, 1998, walkdown. However, there are at least three plugged holes visible in the building wall above the site. These holes are 0.75 meters (2.5 feet), 1.52 meters (5 feet) and 1.7 meters (5.6 feet) above the ground surface. The drain is next to an HVAC unit with a label that reads "RM 13 HVAC MAIN DISC." The site is surrounded by sand, gravel and cobbles. Moss is growing along the north wall of the building and between the drain and the building. Standing water was visible inside the drain during the November 20, 1998, walkdown. Approximately 1 meter (3.2 feet) of the drain was visible above the water. No pipes or openings were visible inside the drain. John Remaize believes this stream is actually the site just west of Door #06. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-136 Classification: Accepted

Site Names: 300-136, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #366

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The site is a french drain that received steam condensate. The drain is a clay pipe with an outer diameter of 0.85 meters (2.79 feet). The drain is covered by a metal lid with some perforations.

diameter of 0.85 meters (2.79 feet). The drain is covered by a metal lid with some perforations. The site is surrounded by sand and gravel, some of which partially covers the lid. The upper lip of the clay pipe is breaking up. The top of the pipe is flush with the ground surface for approximately half of its circumference; the rest is 1 to 2 centimeters (0.4 - 0.8 inches) above the ground surface. Two roof drains are visible nearby; some stormwater runoff may be able to enter the drain. Two metal pipes extend from the 3706 Building approximately 3 meters (9.8 feet) west of the site and enter the ground. One pipe is approximately 5 centimeters (2 inches) in diameter and the other is approximately 12 centimeters (4.7 inches) in diameter. The "Inventory of Miscellaneous Streams," Revision 3, lists the site as inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which

estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706

Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: 300-46

Description:

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-137 Classification: Accepted

Site Names: 300-137, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #440

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site has been described as a french drain that received steam condensate. During the

November 20, 1998, walkdown, an engineered structure could not be discerned. It could not be ascertained whether or not the condensate stream was active or not, but the overhead steam line from 3706-BA, which is on the opposite side of Apple Street, to the 3706 Building did appear to be active - water was dripping from a valve labeled MSS-V-3706. The overhead steam line splits in two outside the 3706 Building. One of the lines enters the north side of the building and the other disappears into the sand. The latter is approximately 9 centimeters (3.6 inches) in diameter. There are pipes extending from the 3706 Building on either side of this site. John Remaize believes this site is actually located just west of the third window west of Door #06. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the

3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-138 Classification: Accepted

Site Names: 300-138, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #360

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a french drain that received steam condensate. The drain has a concrete base and is covered by a 0.66 meter (2.17 feet) by 0.66 meter (2.17 feet) metal lid. The site is surrounded by

gravel. An approximately 2.5 centimeter (1 inch) diameter metal pipe extends from the north wall of the courtyard, makes a 90 degree turn and enters the ground approximately 0.5 meters (1.6 feet) from the site. This pipe has had a section removed from it. The area between the site and the north wall of the courtyard appears to be discolored by rust. The "Inventory of Miscellaneous Streams," Revision 3, lists the site as inactive, source abandoned. The 3706 Building is posted

"Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-139 Classification: Accepted

Site Names: 300-139, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #357

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain is a clay pipe covered by a **Description:** 0.77 meter (2.53 foot) diameter metal lid. The lid has perforations in it. The top of the clay pip

0.77 meter (2.53 foot) diameter metal lid. The lid has perforations in it. The top of the clay pipe ranges from approximately 1 to 5 centimeters (0.4 to 2 inches) above grade. Inside, a metal pipe enters the north side of the drain and another enters the west side of the drain. There also appear to be unattached segments of pipe resting on the floor of the drain. What appears to be a green garden hose enters the drain through a break in the clay pipe. This hose is not connected to any source. There is not any discoloration on the outside of the drain or the surrounding area, but the interior of the drain and the pipes found there appear to be discolored by rust. During the

November 11, 1998, walkdown, the interior of the drain appeared to be dry. The site is surrounded by gravel. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.19 liters per minute (0.05 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-140 Classification: Accepted

Site Names: 300-140, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #356

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a french drain that received steam condensate. The drain is a concrete structure with the inner dimensions of 0.82 meters (2.69 feet) by 0.60 meters (1.97 feet) and is covered by a metal grate. The drain abuts the north wall of the 3706 Building. A second concrete structure abuts the drain to the north. This second structure is covered by a 0.66 meter (2.17 feet) by 0.66 meter (2.17 feet) metal lid. An approximately 10 centimeter (4 inch) diameter opening is visible on the north side of the drain, almost 0.6 meters (2 feet) from its top. Access to the process sewer is approximately 3.5 meters (11.5 feet) to the northeast of the site. It appears as though the drain received fire sprinkler system water in addition to steam condensate. Four metal pipes terminate open-ended over the drain's grate. An approximately 6 centimeter (2.4 inch) pipe extends from the north side of the 3706 Building 0.95 meters (3.1 feet) above the ground surface; an approximately 4 centimeter (1.6 inch) pipe extends from the building 0.6 meters (2 feet) above the ground surface; an approximately 2 centimeter (0.8 inch) pipe extends from the building 0.52 meters (1.7 feet) above the ground surface, and an approximately 3 centimeter (1.2 inch) pipe extends from the building 0.15 meters (0.5 feet) above the ground surface. All four pipes exit the building near a Fire Department Connection. The pipes entering the drain and the grate covering the drain appear to be discolored by rust. Approximately a meter to the east of the site, what appears to be an approximately 15 centimeter (5.9 inch) diameter steam pipe enters the ground. The lower 1.2 meters (3.9 feet) of this pipe appear to be of newer construction than the upper section; the upper section has rust marks from the wires that encircle it while the lower section doesn't. During the November 18, 1998, walkdown, there was standing water in the drain. The surface of the water was approximately 0.6 meters (2 feet) from the top of the drain. There had not been any rainfall for almost 2 weeks at that time. According to John Remaize, the steam and fire water for the building are still active. There is a 30 centimeter (11.8 inches) diameter clay pipe 4.3 meters (14.1 feet) east of the site. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.19 liters per minute (0.05 gallons per

Description: minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-141 Classification: Accepted

Site Names: 300-141, 3706 Building Steam Condensate, ReClassification: Rejected (Consolidation) (1/19/

Miscellaneous Stream #439, Injection Well

#29

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain appears to be a concrete pipe

Description: with a 0.91 meter (3 foot) metal lid at grade level; however, the site is well obscured by sand and

gravel. During the October 26, 1998, walkdown, the metal lid appeared to be ajar. There are two steam pipes entering the ground approximately 3 meters (9.8 feet) west of the site. One of these pipes is approximately 7 centimeters (2.8 inches) in diameter and the other is approximately 8 centimeters (3.1 inches) in diameter. There is also a metal pipe extending from the south side of the building next to the site. This pipe terminates approximately 1.8 meters (5.9 feet) above the ground surface and has been plugged. This third pipe is approximately 5 centimeters (2 inches) in diameter. The site is surrounded by sand and gravel. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-142 Classification: Accepted

Site Names: 300-142, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #369, Injection Well

#30

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain is an open clay pipe that abuts the south wall of the 3706 Building and is surrounded by asphalt and sand. The inner

abuts the south wall of the 3706 Building and is surrounded by asphalt and sand. The inner diameter of the top 7 centimeters (2.8 inches) of the pipe is 0.55 meter (1.80 feet). Below the top 7 centimeters (2.8 inches), the inner diameter is reduced to 0.44 meters (1.4 feet). The top of the pipe rises approximately 0.35 meters (1.1 feet) above the ground surface. The bottom of the drain is covered by debris. The top of the debris is approximately 0.7 meters (2.3 feet) below the top of the pipe. No pipes are visible entering the drain. However, there are two approximately 2.5 centimeter (1 inch) holes drilled into the side of the pipe. The clay around these holes as well as the interior of the pipe appear to be rust stained. An approximately 3 centimeter (1.2 inches) metal pipe exits the building 0.6 meters (2 feet) above the ground surface, makes a 90 degree turn and enters the ground approximately 0.6 meters (2 feet) east of the drain. Further east, on the opposite side of a wall extension, there is an approximately 5 centimeter (2 inch) metal pipe that exits the building approximately 0.45 meter (1.5 feet) above the ground surface and enters the ground. This second pipe is approximately 1.8 meters (5.9 feet) from the site and approximately 1 meter (3.2 feet) from a second clay pipe. This second clay pipe is approximately 0.75 meters (2.5 feet) in diameter. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute)

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-143 Classification: Accepted

Site Names: 300-143, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #361

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a french drain that receives steam condensate. The drain has a concrete base and is covered by a 0.66 meter (2.17 foot) by 0.66 meter (2.17 foot) metal lid. The site is surrounded by

gravel and weeds. During the November 11, 1998, walkdown, the lid could not be removed. From the outside, there are no apparent steam lines entering the site. There are pipes extending from the south wall of the courtyard, but none near the drain. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the

surrounding area.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters per minute (0.01 gallons per minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-144 Classification: Accepted

Site Names: 300-144, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #358

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The drain is a clay pipe covered by a

Description: 0.85 meter (2.79 foot) diameter metal lid. The top of the clay pipe is approximately 0.3 meters (1

foot) above the ground surface. The lid has an opening allowing pipes to enter the drain. An approximately 2.5 centimeter (1 inch) metal pipe and an approximately 1.3 centimeter (0.5 inch) diameter clear, plastic hose enter the drain through this opening. The plastic hose is attached to what appears to be a steam line extending through an old window or other former opening in the west wall of the courtyard. This opening is 2 to 3 meters (6.6 to 9.8 feet) north of the site and is currently boarded up. An approximately 5 centimeter (2 inch) diameter metal pipe exits the west

wall of the courtyard, makes a 90 degree turn and enters the ground near the pipe. The clay pipe is broken, making removal of the lid unsafe. During the November 11, 1998, walkdown, the interior appeared dry when viewed through a break in the clay pipe. The site is surrounded by sand. The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.19 liters per minute (0.05 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-145 Classification: Accepted

Site Names: 300-145, 3706 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #438, Injection Well

#25

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a french drain that received steam condensate. The drain is a clay pipe covered by a 0.78 meter (2.56 foot) metal cover. The lid is posted "Confined Space." The lip of the pipe is broken on its northeast side; this could allow stormwater runoff to enter. "FD 25" is written on the wall of the 3706 Building above the site. A metal pipe approximately 2.5 centimeters (1 inch) in diameter extends from the west side of 3706 just south of the site. This pipe exits the building approximately 3 meters (10 feet) above the ground surface and terminates approximately 15 centimeters (5.9 inches) after leaving the building. It was difficult to ascertain whether the pipe was plugged or not. The side of the building below this pipe appears to have rust stains. A second metal pipe approximately 2.5 centimeters (1 inch) in diameter extends from the south side of 3706, just around the corner from the site. This pipe leaves the building approximately 0.9 meters (3 feet) above the ground surface and disappears into the ground. The site is surrounded by soil and gravel. Moss is growing on the south side of the drain. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-146 Classification: Accepted

Site Names: 300-146, 3706 Building Stormwater ReClassification: Rejected (1/19/1999)

Runoff, Miscellaneous Stream #364

Site Type: French Drain Start Date:

Site Status: Active End Date:

The site is a french drain that receives stormwater runoff. The drain is made of concrete and is covered by a 0.90 meter (2.95 foot) by 0.45 meter (1.48 foot) metal grate. An approximately 0.3

meter (1 foot) diameter metal pipe enters the east side of the drain. The site is surrounded by gravel and weeds. During the November 11, 1998, walkdown, standing water was visible through the grate; it had rained over the past week. The standing water made it difficult to estimate the depth of the drain, but it appears to be at least 0.9 meters (3 feet) deep. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the

surrounding area.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.01

Description: gallons per minute.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-147 Classification: Accepted

Site Names: 300-147, 3706 Building Stormwater **ReClassification:** Rejected (1/19/1999)

Runoff, Miscellaneous Stream #363

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a french drain that receives stormwater runoff. The drain is made of concrete and is covered by a 0.90 meter (2.95 foot) by 0.45 meter (1.48 foot) metal grate. The drain appears to

be approximately 0.9 meters (3 feet) deep. An approximately 0.3 meter (1 foot) diameter metal pipe enters the eastern side of the drain. The site is surrounded by gravel and weeds. During the November 11, 1998, walkdown, the drain appeared to be dry, its bottom covered by debris. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the

3706 Building and the surrounding area.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters per minute (0.01 gallons per minute).

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-148 **Classification:** Accepted

300-148, 3706 Building Stormwater **ReClassification:** Rejected (1/19/1999) **Site Names:**

Runoff, Miscellaneous Stream #359,

Injection Well #22

Start Date: Site Type: French Drain **Site Status: End Date:** Active

Site The site is described by the "Inventory of Miscellaneous Streams," Revision 3, as a french drain that collects stormwater runoff. The drain is an uncovered concrete pipe with an outer diameter of **Description:**

0.9 meters (2.95 feet). The top of the pipe is flush with the ground surface on its southeast side while the northwest side is 7 centimeters (2.8 inches) above grade. The pipe appears to be filled with gravel and large rocks to within centimeters of its top. The drain is surrounded by gravel and soil. There is no evidence of a roof drain at this site. A 2.5 centimeter (1 inch) diameter metal pipe exits the west side of the building approximately 1.8 meters (5.9 feet) above the ground surface, makes a 90 degree turn towards the ground and terminates open-ended approximately 0.75 meters (2.5 feet) above the ground. The side of the drain closest to the 3706 Building, the gravel and rock between the building and the drain, as well as the side of the 3706 Building adjacent to the site all appear to be discolored by rust. The 3706 Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the

surrounding area.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038 **Description:**

liters per minute (0.01 gallons per minute). During the October 26, 1998, walkdown, the site

appeared to be a steam condensate site as opposed to a stormwater site.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Within Boundary Of Larger Site Reason:

Site Code: 300-149 Classification: Accepted

ReClassification: Rejected (1/19/1999) **Site Names:** 300-149, 3706A Building Steam

Condensate, Miscellaneous Stream #432,

Injection Well #28

Site Type: French Drain **Start Date: End Date: Site Status:** Inactive

Site The site is a french drain that received steam condensate. The french drain is a concrete pipe

Description: covered with a 0.88 meter (2.89 foot) perforated metal lid. The lid is posted "Confined Space." The top of the pipe is 5 to 9 centimeters (2 to 3.5 inches) above the ground surface. A steam pipe enters the ground approximately 0.4 meters (1.31 feet) south of the site. The pipe is labeled "HPD-TRP-024" and "HPD-TRP-025." A 2.5 centimeter (1 inch) metal pipe is visible under the cover; it extends approximately 20 centimeters (7.9 inches) from the side of the concrete pipe and is in line with the steam pipe. The concrete pipe is 0.98 meters (3.2 feet) in length. The space below the concrete pipe appears to be filled with rocks and cobbles. During the October 27, 1998, walkdown, there was no evidence that the site was in use. The site is surrounded by asphalt, soil and gravel. The 3706A Building is posted "Fixed Contamination Area." The site falls within WIDS Site 300-46 which estimates the extent of extensive uranium, transuranic and chemical contamination of the 3706 Building and the surrounding area. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute) of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-150 Classification: Accepted

Site Names: 300-150, 3706 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #430

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that is a clay pipe. The outer diameter of the pipe is 1.25 meters (4.10

Description: feet). The pipe is covered by a metal lid which is labeled "Danger - Confined Space." The

upper lip of the pipe is breaking up. The top of the pipe is flush with the ground surface for approximately one half of its circumference. The other half is 1 to 2 centimeters (0.4 to 0.8 inches) above the ground. The pipe is surrounded by soil and gravel. A pipe from the overhead steam line enters the ground nearby. This pipe is labeled "HPD-TRP-021." According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned. Because of the broken lip on the pipe, the site may collect stormwater from the roadway.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

The Site Was Consolidated With:

Site Code: 300-46

Site Names: 300-46, Soil Contamination Surrounding 3706 Building

Reason: Within Boundary Of Larger Site

Site Code: 300-151 Classification: Accepted

Site Names: 300-151, 3707B Building Steam

Condensate, Miscellaneous Stream #327

ReClassification: Rejected (12/15/1998)

ReClassification: Rejected (12/15/1998)

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site Description:

The site is a french drain that is a clay pipe 0.86 meters (2.82 feet) in diameter. The pipe is surrounded by asphalt and cobbles. The drain has an inset metal lid. A small diameter (approximately 2.5 centimeters or 1 inch) metal pipe enters the lid through an opening. Water was observed through this opening on a 10/13/98 visit to the site. At the time of the walkdown, the site was surrounded by a metal barricade. The label "HDP-TRP-009" mentioned in the "Inventory of Miscellaneous Streams," Revision 3, was not observed. The former location of the 3707B Building is currently home to electrical equipment and a Johnson Controls, Inc., air compressor. The "Inventory of Miscellaneous Streams," Revision 3, states that this site previously received steam condensate from the main steam line at pit U57 (300-152, stream #326), but now receives condensate from a Johnson Controls, Inc. air compressor.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters per minute (0.01 gallons per minute).

Site Code: 300-152 Classification: Accepted

Site Names: 300-152, 3707B Building Steam

Condensate, Miscellaneous Stream #326,

U57

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site Description:

The site is a french drain. The base of this drain is constructed of corrugated metal and is covered by a 1.3 meter (4.27 foot) metal lid. The lid is labeled "Confined Space" and "U-57." The top of the lid ranges from 5 to 15 centimeters (2 to 6 inches) above grade. The site is surrounded by soil and gravel. The former location of the 3707B Building is currently home to electrical equipment and a Johnson Controls, Inc., air compressor. According to the "Inventory of Miscellaneous

Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-153 Classification: Accepted

Site Names: 300-153, 3707B Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #328

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site The site is a french drain which received steam condensate. According to the "Inventory of **Description:** Miscellaneous Streams," Revision 3, the stream status is inactive, source abandoned. The former

location of the 3707B Building is currently home to electrical equipment and a Johnson Controls,

Inc., air compressor. No evidence of the site was visible during the site walkdown.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-154 Classification: Accepted

Site Names: 300-154, 3707B Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #325

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is not an engineered structure. No pipe or lid was evident during the 10/13/98 walkdown. The ground surface is covered with soil and gravel. A pipe descending from the

overhead steam line discharged directly onto the ground. At the time of the walkdown, the site was not labeled "HPD-V-015C" as described in the "Inventory of Miscellaneous Streams," Revision 3. However, the site is below a valve labeled "MSS-V-015." A small, shallow natural depression was observed just southwest of the discharge point. Stormwater runoff could collect in this depression. The former location of the 3707B Building is currently home to electrical

equipment and a Johnson Controls, Inc., air compressor. The "Inventory of Miscellaneous

Streams," Revision 3, says the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-155 Classification: Accepted

Site Names: 300-155, 3707C Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #179,

Injection Well #24

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site The site is a french drain that received steam condensate. The former location of the 3707C

Description: Building is currently a cobble-covered field. No evidence of the site remains. According to the

"Inventory of Miscellaneous Streams," Revision 3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.38 liters per minute (0.1 gallons per minute) of

Description: steam condensate only.

Site Code: 300-156 Classification: Accepted

Site Names: 300-156, 3707C Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #178,

Injection Well #23

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

The site is a french drain covered by a 1.1 meter (3.61 foot) metal lid. The lid is labeled **Description:** "Confined Space." The drain itself appears to be approximately half the diameter of the lid.

Because of the size difference between the lid and the drain, it was difficult to get a good look inside the drain. The upper part of the drain appears to be made of bricks. The site is surrounded by gravel. A manhole labeled "Caution, Radioactive Material, Internally Contaminated" is approximately 2 meters (6.6 feet) to the northwest. This manhole is related to the 300 Area Process Sewer System (WIDS Site 300-15). According to the "Inventory of Miscellaneous

Streams," Revision 3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.38 liters per minute (0.1 gallons per minute) of

Description: steam condensate only.

Site Code: 300-157 Classification: Accepted

Site Names: 300-157, 3707C Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #337

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site The site is a french drain that is a clay pipe. The upper lip of the clay pipe is breaking up. The **Description:** drain is covered by a 0.76 meter (2.49 foot) metal lid. The drain is surrounded by a metal safety

drain is covered by a 0.76 meter (2.49 foot) metal lid. The drain is surrounded by a metal safety barricade and the area around the it is covered with cobbles. According to the "Inventory of

Miscellaneous Streams," Revision 3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-158 Classification: Accepted

Site Names: 300-158, 3707C Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #336,

F.D. #31

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site The site is a french drain that received steam condensate. The former location of the 3707C

Description: Building is currently a cobble-covered field. No evidence of the site remains. According to the

"Inventory of Miscellaneous Streams," Revision 3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-159 Classification: Accepted

Site Names: 300-159, 3707C Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #335,

F.D. #4

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1996

Site The site is a french drain that received steam condensate. The former location of the 3707C **Description:** Building is currently a cobble-covered field. There is no evidence of a french drain in the

location described for this site. According to the "Inventory of Miscellaneous Streams," Revision

3, the site is inactive.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute of

Description: steam condensate only.

Site Code: 300-160 Classification: Accepted

Site Names: 300-160, 3707D Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #443,

Injection Well #10

Site Type: Injection/Reverse Well Start Date:
Site Status: Active End Date:

Site The site is a rectangular concrete structure. It is painted yellow and is marked with "Confined

Description: Space" signs.

Waste Type: Steam Condensate

Waste The site receives less than 0.038 liters per minute (0.01 gallons per minute) of steam condensate.

Description:

Site Code: 300-161 Classification: Accepted

Site Names: 300-161, 3707D Building Stormwater ReClassification: Rejected (12/15/1998)

Runoff, Miscellaneous Stream #441

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The site is a 68 centimeter (27 inch) drain with a perforated metal cover. It is marked with a

Description: "Confined Space" sign.

Waste Type: Stormwater Runoff

Waste The site receives surface runoff from a paved area adjacent to the 3707D building. According to

Description: the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than 0.038 liters per

minute (0.01 gallons per minute).

Site Code: 300-162 Classification: Accepted

Site Names: 300-162, 3707D Building Stormwater ReClassification: Rejected (12/15/1998)

Runoff, Miscellaneous Stream #442

Site Type: Injection/Reverse Well Start Date:

Site Status: Active End Date:

Site The site is a 68 centimeter (27 inch) drain with a perforated metal cover.

Description:

Waste Type: Stormwater Runoff

Waste The site receives surface runoff from a paved area adjacent to the 3707D building. According to

Description: the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038 liters per

minute (0.01 gallons per minute).

Site Code: 300-163 Classification: Accepted

Site Names: 300-163, 3708 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #423

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The french drain is a vitrified clay pipe buried vertically. The top is even with the ground surface

Description: and is covered with a metal lid. Two lines discharge into the drain.

Waste Type: Steam Condensate

Waste The unit received steam condensate from the 3708 building.

Description:

Site Code: 300-164 Classification: Accepted

Site Names: 300-164, 3709 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #338, F.D. #3

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is a french drain that appears to be a concrete pipe and is covered by a 1.46 meter (4.79)

Description: foot) metal lid. The lid is labeled "Confined Space." The lid was not labeled "F.D. #3" as

described by the "Inventory of Miscellaneous Streams," Revision 2. The lid is almost flush with the ground surface and is surrounded by asphalt. A metal pipe approximately 4 centimeters (1.6 inches) in diameter extends from the north side of the 3709 building and enters the ground

approximately 1 meter (3.5 feet) from the edge of the drain.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-165 Classification: Accepted

Site Names: 300-165, 3709A Building Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #347

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1996

Site The site is an injection well that received air compressor condensate. The site is a 0.5 meter (1.64)

Description: foot) diameter concrete structure with a heavy metal cover. There are two holes in the cover.

During the 10/9/98 walkdown, there did not appear to be any water in the drain (observed through

one of the holes in the cover).

Waste Type: Water

Waste The site received air compressor condensate. The "Inventory of Miscellaneous Streams,"

Description: Revision 1, lists the flow rate as less than 0.038 liters per minute (0.01 gallons per minute).

Revisions 2 and 3 of the document list the flow as 0 liters per minute (0 gallons per minute)

because the stream was discontinued.

Site Code: 300-166 Classification: Accepted

Site Names: 300-166, 3709A Building Steam Trap, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #355

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well that was a steam trap. The top of the drain is flush with the asphalt

Description: parking area. The site is covered with a 1.47 meter (4.82 foot) diameter steel lid with four holes

in the cover. The lid is labeled "U-40" and "Confined Space."

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-167 Classification: Accepted

Site Names: 300-167, 3711 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #343

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1997

Site The site is a french drain that received steam condensate. A pipe from the overhead steam line **Description:** enters the ground in the location described for this site. During the 10/14/98 site walkdown, no

evidence of a drain was visible. Tags labeling the valves HPD-V-1001, HPD-V-5001, HPD-V-2001, and HPD-V-3001 were observed. There was not a tag for HPD-TRP-001, which was described in the "Inventory of Miscellaneous Streams," Revision 3. The area surrounding the descending steam pipe is covered with soft sand, which is deep in places. The sand could be

obscuring evidence of the site.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-168 Classification: Accepted

Site Names: 300-168, 3711 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #433

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that is a concrete pipe. The pipe does not have a lid and appears to be filled with sand, cobbles and broken bricks. The top of the pipe, which is breaking up, ranges

from 1 centimeter (0.4 inches) to 10 centimeters (4 inches) above grade. Three metal pipes approximately 2.5 centimeters (1 inch) in diameter extend from the 3711 Building. The open ends of these three pipes are poised over the top of the drain. A "Radioactive Material Area" is

located approximately 5 meters (16.4 feet) to the east.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-169 Classification: Accepted

Site Names: 300-169, 3712 Building Steam Condensate, ReClassification: Rejected (1/19/1999)

Miscellaneous Stream #351

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site Description:

According to the "Inventory of Miscellaneous Streams," Revision 3, the site is a french drain that receives steam condensate at a flow rate of less than 0.38 liters (0.01 gallons) per minute. Based on a site inspection in June of 1997, the drain is composed of a 0.48 meter (1.57 foot) diameter metal culvert that abuts the east side of the 3712 Building. The culvert is uncovered and appears to be rust stained. The culvert appears to be filled with sand or other soil to within 0.50 meters (1.6 feet) of its top. A 3 centimeter (1.2 inch) diameter metal pipe enters the top of the culvert and intersects a horizontal pipe, making a T-intersection. This second pipe is oriented north-south. One end has a valve. The other end makes a 90 degree turn towards the 306 Building. The vertical pipe that enters the top of the culvert rises to just under the roof line of the 3712 Building where it continues north along the east side of the building, turns and travels west. At another T-intersection near the center of the north side, a short pipe extends downward and appears to be capped. The other segment continues in the towards the northwest corner of the building where it drops towards the ground surface. This pipe terminates open-ended 0.20 meters (0.66 feet) above the ground surface.

During a November 1998 site inspection, the source of the steam condensate for this french drain came into question. Tracing out the lines, and verifying with drawing M-3901, Sheet 2, Revision 30, it was determined that the line into the french drain is actually a line from an abandoned helium system that ran between the 306 and 3712 Buildings. This line terminates open-ended. The drawing shows a gate valve to the atmosphere at the culvert on the east side of the building and at the northwest corner of 3712, plus a 2.5 centimeter (1 inch) gate valve near the center of the north side of 3712.

It is believed that this site was mistakenly included in the miscellaneous streams inventory, and that is was in fact a purge point for the helium system.

This site is located within a "Radiologically Controlled Area" posted around the 3712 Building. The 3712 Building is an active uranium metal storage unit, documented as WIDS Site 3712 USSA, and posted as "Caution Fissile Materials" and "Radiation Area and Contamination Area".

Waste Type: Water

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the site received steam **Description:** condensate with a flow rate less than 0.01 gallons per minute. According to technical personnel

responsible for the site, this site was mistakenly identified as a miscellaneous stream site.

Waste Type: Chemicals

Waste According to M-3901, sheet 2, revision 30, an abandoned helium line travels through this site,

Description: not a steam condensate line.

Site Code: 300-170 Classification: Accepted

Site Names: 300-170, 3712 Building Steam Condensate, ReClassification: Rejected (2/24/1999)

Miscellaneous Stream #437

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site According to the "Inventory of Miscellaneous Streams," Revision 3, the site was a french drain that received steam condensate. The report identified the location as the north side of the 3712

Building directly next to the building.

During the October 27, 1998 walkdown, a concrete pipe with a 1.0 meter (3.3 foot) metal lid was found at the top of a small slope approximately 13 meters (42.7 feet) northwest of the roll up door on the north side of 3712. The metal lid is not labeled. Based on previous experience with the location descriptions and coordinates in the "Inventory of Miscellaneous Streams," this structure seems to fit the description for this stream.

The top of the concrete is above grade except where the surrounding cobbles are spilling over and partially covering the lid.

Two metal pipes extend horizontally from the north side of 3712 Building 6 to 9 meters (20 to 30 feet) above the ground surface. One of these pipes appears to be capped; the other appears to be open-ended and approximately half the diameter of the capped pipe. Drawing M-3800, sheet 2, revision 20, shows a steam line running from approximately the center of the north side of the 3712 Building north to 3710A, which has since been demolished. A Johnson Controls, Inc., boiler house has been built north of the northeast corner of 3712. During the October 27, 1998, walkdown, the lid could not be lifted in order to verify whether or not this stream is still active.

Another walkdown was done on February 17, 1999 for the purpose of lifting the lid on the site and taking a photograph. There are no pipes visible inside the drain. There is no evidence the drain is active. The concrete pipe is filled with large rocks to within a few inches below the metal cover. Nat Harden, DynCorp Electrical System Specialist was visited. He looked through the available service drawings for the location. Nat stated that he was fairly sure that this waste site was the french drain for the steam condensate from the 3710A Building (now demolished). He said that the 3710A Building steam supply was an overhead line that ran from the north side of the 3712 Building. Nat noticed that the steam line is shown as dashed (denoting an underground) line on the as-built drawings whereas it should be shown as an above ground line that has been removed. The waste site is not shown on any of the utility drawings that Nat had.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow was less than

Description: 0.038 liters (0.01 gallons) per minute.

Site Code: 300-171 Classification: Accepted

Site Names: 300-171, 3713 Building Steam Condensate ReClassification: Rejected (12/15/1998)

and Stormwater Runoff, Miscellaneous

Stream #333, F.D. #7

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that currently receives only stormwater. It is a clay pipe covered by a **Description:** 0.32 meter (1.05 foot) metal lid. The lid is perforated. The lid was not labeled F.D. #7 as

described in the "Inventory of Miscellaneous Streams," Revison 2. The top of the drain is flush with the ground surface. The drain appears to be filled with soil to within 30 centimeters (11.8 inches) of the top of the pipe. The site is surrounded by soil and gravel. Soil is subsiding around the drain (see photos). According to the "Inventory of Miscellaneous Streams," Revision 3, the

steam source has been shut off.

Waste Type: Steam Condensate

Waste When the site was active, the flow rate for both steam condensate and stormwater runoff was

Description: listed in the "Inventory of Miscellaneous Streams" as less than 0.076 liters per minute (0.02)

gallons per minute).

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.076 liters per minute (0.02 gallons per minute)

Site Code: 300-172 Classification: Accepted

Site Names: 300-172, 3713 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #435

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site has been described as an injection well. The site is not covered by a lid and no

Description: engineered structure is evident. The surface is covered with cobbles and larger rocks. A portion

of the cobbled area, approximately 0.4 meters (1.31 feet) in diameter, appears to be depressed. Stormwater runoff may be able to collect in this depression. The site is surrounded by soil and gravel. A pipe from the overhead steam line labeled "HPD-TRP-018" enters the ground just north

of the site.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-173 Classification: Accepted

Site Names: 300-173, 3713 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #512

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is a french drain covered by a 1.14 meter (3.74 foot) metal lid. The lid is flush with the ground surface and is labeled "Confined Space." A pipe extending from the overhead steam line

enters the ground near the lid. The site is surrounded by soil and gravel.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 3.8 liters per minute (1.0 gallon per minute) of

Description: steam condensate only.

Site Code: 300-174 Classification: Accepted

Site Names: 300-174, 3713 Building Stormwater Runoff ReClassification: Rejected (12/15/1998)

and Steam Condensate, Miscellaneous

Stream #544

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain that currently receives stormwater. It is covered by a 0.94 meter (3.08)

Description: foot) metal lid. The lid is flush with the ground surface and is surrounded by gravel. A small diameter (< 2.5 centimeters [< 1 inch]) metal pipe extends from the building in line with the

drain's lid. The pipe extends from the building approximately 1.75 meters (5.7 feet) above the ground surface, makes a 90 degree turn towards the ground, extends to within 0.25 meters (9.8

inches) of the ground surface and stops. The end of this pipe is open.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 3.8 liters per minute (1 gallon per minute)

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate was less than

Description: 3.8 liters per minute (1 gallon per minute).

Site Code: 300-175 Classification: Accepted

Site Names: 300-175, 3714 Building Steam Condensate, **ReClassification:**

Miscellaneous Stream #434

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1995

The site is a 36 centimeter (14.2 inch) diameter, concrete french drain with a metal cover. The

Description: inside is dry and filled with cobbles. There are no steam lines entering the site, and no steam lines

are visible inside the drain.

Waste Type: Steam Condensate

Waste The waste was nondangerous/nonradioactive steam condensate only. The flow rate when the

Description: site was active was less than 0.038 liters (0.01 gallons) per minute.

Site Code: 300-176 Classification: Accepted

Site Names: 300-176, 3715 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #678

Site Type: Valve Pit Start Date:

Site Status: Inactive End Date: 1998

Site The site is a rectangular valve pit with a dirt floor. Steam condensate was discharged onto the **Description:** floor of the pit. The top of the concrete base is 5 to 15 centimeters (1.97 to 5.91 inches) above

grade. The valve pit is covered by a metal lid 1.30 meters (4.27 feet) by 1.11 meters (3.64 feet). The lid is labeled "Confined Space" and "U-49." A steam pipe from the overhead line enters the

ground just east of the site. The pipe is labeled "HPD-TRP-005." The site is surrounded by sand

and asphalt.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-177 Classification: Accepted

Site Names: 300-177, 3717 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #330

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1998

Site The site is an injection well that received steam condensate. The site is a 90 centimeter (2.95)

Description: foot) diameter, concrete structure with a perforated metal cover. It is located adjacent to an

overhead steam line, but there is no visible evidence of a steam pipe connecting to this drain. The

drain is in a slight depression from the surrounding grade.

Waste Type: Steam Condensate

Waste When the site was active, it received less than 0.038 liters per minute (0.01 gallons per minute)

Description: of steam condensate only.

Site Code: 300-178 Classification: Accepted

Site Names: 300-178, 3717 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #329

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that is a clay pipe. The top of the clay pipe is 5 centimeters (2 inches)

Description: above grade. The drain appears to be filled with sand or soil to within 0.35 meters (1.15 feet) of

the top of the pipe. The drain is covered by a 0.25 meter (0.82 foot) metal lid with perforations. There was no evidence of use observed during the 10/08/98 walkdown. The site is surrounded by

soil and gravel.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-179 Classification: Accepted

Site Names: 300-179, 3717 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #324

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain that is a clay pipe. The upper lip on half of the pipe is broken; therefore,

Description: the 0.39 meter (1.28 foot) metal lid doesn't seat properly. During the 10/8/98 walkdown, the site was surrounded by a metal safety barricade. During the same walkdown, it was observed that the

pipe that descended from the overhead steam line was not labeled. The "Inventory of

Miscellaneous Streams," Revision 3, states "HPD-TRP-022" is the steam trap associated with this

french drain. The broken lip may allow stormwater runoff to enter this drain. The site is

surrounded by soil and gravel.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-180 Classification: Rejected (12/15/1998)

Site Names: 300-180, 3717 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #545

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site The site is a french drain that is a clay pipe covered by a perforated metal lid. The lid is 0.77 **Description:** meters (2.53 feet) in diameter and is missing a rectangular-shaped section along its edge. The

meters (2.53 feet) in diameter and is missing a rectangular-shaped section along its edge. The pipe is surrounded by soil, gravel and concrete. The top of the pipe is approximately 1 centimeter

(0.4 inches) above the ground surface. The pipe is filled with soil and cobbles to within

approximately 0.4 meters (1.3 feet) of the top of the pipe.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than 3.8

Description: liters per minute (1.00 gallon per minute).

Site Code: 300-181 Classification: Accepted

Site Names: 300-181, 3717 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #180

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site The site is a french drain covered by an eight-sided metal lid. The diameter of the lid ranges from

Description: 0.60 meters (1.97 feet) to 0.66 meters (2.17 feet) and it appears to have been welded shut on one

side. The site is surrounded by asphalt and concrete. A small area of concrete on the west side of

the lid appears to have been excavated.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams." Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-182 Classification: Accepted

Site Names: 300-182, 3717B Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #323

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain with a square concrete base. The top of the base ranges from **Description:** approximately 1 centimeter (0.4 inches) to 5 centimeters (2 inches) above grade. The drain is

covered by a 0.66 meter (2.17 foot) by 0.66 meter (2.17 foot) square metal lid. The lid has the remains of a "Confined Space" label. The site is surrounded by gravel where it doesn't abut 3717B. Two pipes from the overhead steam line enter through the lid. A row of "Radiologically Controlled Area" signs run east to west approximately 5 meters (16.4 feet) north of the site. These signs seem to refer to the area around the 304 Building, which is immediately north of the site, and the 303A Building, which is northwest of the site. The door and concrete pad on the south side of 304 are labeled "Fixed Contamination." Although the ground between 3717B and 304 is fairly level, there appears to be enough of a slope to prevent water flowing from the 304

Building towards the site.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-183 Classification: Accepted

Site Names: 300-183, 3718 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #340, F.D. #40

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is a french drain that received steam condensate. The drain is a clay pipe with an outer diameter of 0.89 meters (2.92 feet) and is covered by a metal lid. The top of the clay pipe is

diameter of 0.89 meters (2.92 feet) and is covered by a metal lid. The top of the clay pipe is approximately 14 centimeters (5.5 inches) above grade. During the site walkdown, the site was surrounded by a metal safety barricade. It was also observed that the lid has some sort of white powdery buildup. The drain was not labeled "F.D. #40" as described in the "Inventory of Miscellaneous Streams," Revision 2. The site is surrounded by asphalt. It appears as though a section of asphalt between the site and the 3718 Building has been excavated. Four metal pipes extend from the south wall of the 3718 Building near the site. Two of these pipes, which are

approximately 10 centimeters (3.9 inches) and 12 centimeters (4.7 inches) in diameter, exit the building within 1 meter (3.3 feet) of the ground surface make a 90 degree and disappear into the

asphalt. The other two pipes exit the building approximately 3.0 meters (10 feet) above the ground surface. One makes a 90 degree turn towards the roof and the other makes a 90 degree turn towards the ground. Both appear to terminate open-ended above the ground.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow rate was less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-184 Classification: Rejected (9/2/1998)

Site Names: 300-184, 3718A Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #270

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Twin 10-centimeter (4-inch) galvanized pipes drain each of two roofs that slope into each other in the center of the building. The pipes are joined about 0.7 meters (2 feet) above the ground in a Y,

and empty into a 14-centimeter (6-inch) PVC pipe. This pipe travels just under the ground surface for about 12.2 meters (40 feet) and exits from a railroad tie retaining wall. The stormwater then spills onto the ground between the road and retaining wall. The soils are very sandy and the water probably infiltrates without overland flow. While the miscellaneous streams report (Rev. 3) says that it is an injection well, there is no injection well; the stormwater runoff

ultimately empties into a "non-engineered structure" (the bare ground).

Waste Type: Stormwater Runoff

Waste The waste is stormwater runoff only.

Description:

Site Code: 300-185 Classification: Accepted

Site Names: 300-185, 3722 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #436, Injection Well

#6

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1998

Site The site is a french drain that is a metal pipe 0.74 meters (2.43 feet) in diameter. The top of the

Description: pipe is uncovered and flush with the ground surface. The pipe appears to be filled with gravel to

within centimeters of the top. Stormwater runoff may be able to enter this drain from the surrounding area. Two lines from the overhead steam line enter the ground nearby. One line is associated with HPD-TRP-013 and the other is associated with HPD-TRP-014. The site is

surrounded by gravel.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow rate was less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-186 Classification: Accepted

Site Names: 300-186, 3730 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #383

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site Description:

pipes are uninsulated and are 3.2 centimeters (1.25 inches) and 4.4 centimeters (1.75 inches) outside diameter. The grate covers a sump that is approximately 0.76 meters (2.5 feet) deep. The apparent drain is approximately 0.46 meters (1.5 feet) from the bottom and leads back into the building (east). A cast iron elbow, 10.2 centimeters (4 inches) outside diameter, in the bottom of the sump does not appear to relate to the drainage.

The site is a steel grate 48.3 centimeters (19 inches) square with two pipes emptying into it. The

Note that "Inventory of Miscellaneous Streams", Revision 3 (Final Draft) lists the site "Active". According to the responsible contractor, the document is not correct, as the site is inactive.

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-187 Classification: Accepted

Site Names: 300-187, 3730 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #421

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is two pipes coming out of ground, with valves near each. The pipes are connected with a tee in the middle leading to a pipe that goes into the 3730 Building. The pipes are covered with asbestos-free insulation. The pipes are approximately 10.2 centimeters (4 inches) in diameter, including the insulation.

Note that "Inventory of Miscellaneous Streams", Revision 3 (Final Draft) lists the site "Active". According to the responsible contractor, the document is not correct, as the site is inactive.

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-188 Classification: Accepted

Site Names: 300-188, 3730 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #420

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is covered by a rusted steel plate, 0.84 meters (2.75 feet) in diameter, and with a 10.2

Description: centimeter (4 inch) diameter asbestos-free insulated steam pipe running into the northeast part of plate. Four 2.54 centimeter (1 inch) diameter holes are cut into the plate. A label on top of the

plate. Four 2.54 centimeter (1 inch) diameter holes are cut into the plate. A label on top of the plate reads "DANGER LIMITED ACCESS/CONFINED SPACE, ENTRY BY PERMIT ONLY."

Waste Type: Steam Condensate

Waste

Description:

300-189 **Site Code: Classification:** Accepted

300-189, 3731 Building Steam Condensate, **ReClassification:** Rejected (9/2/1998) **Site Names:**

Miscellaneous Stream #269

Site Type: French Drain **Start Date:**

Site Status: Inactive End Date:

The site is a french drain that is a 10 centimeter (4 inch) metal pipe through the asphalt that surrounds the building. The pipe is about 0.75 meters (2.5 feet) deep. The downspout that enters **Description:**

it comes from the top half of the building, about 0.6 meters (2 feet) south of the swamp cooler. The "Inventory of Miscellaneous Streams", Revision 3, says the stream is active, but the building

is posted as closed, and the drain is dry at the bottom.

Note that "Inventory of Miscellaneous Streams", Revision 3 (Final Draft) lists the site as an active steam condensate drain. According to the responsible contractor, the document is not correct, as

ReClassification:

the site should be listed as an inactive steam condensate site.

Steam Condensate **Waste Type:**

Waste

Description:

Site Code: 300-190 **Classification:** Rejected (9/2/1998)

300-190, 3731 Building Stormwater **Site Names:**

Runoff, Miscellaneous Stream #517

Start Date: Site Type: French Drain

Site Status: Active **End Date:**

The site is a french drain that is a 17.8 centimeter (7 inch) PVC pipe through the asphalt paving **Description:** against the 3731 Building. The drain receives only stormwater from the roof of the 3731

Building, which is a closed facility. The downspout is almost the same diameter as the french

drain, so the depth was not determined. The french drain pipe is cracked.

Waste Type: Stormwater Runoff

Waste

Site

Description:

Site Code: 300-191 **Classification:** Rejected (9/2/1998)

300-191, 3731 Building Stormwater ReClassification: **Site Names:**

Runoff, Miscellaneous Stream #518

Site Type: French Drain **Start Date: End Date: Site Status:** Active

The site is a french drain that is an 18 centimeter (7 inch) PVC pipe through the asphalt that Site

surrounds the building. The drain receives only roof stormwater runoff. The 3731 facility is **Description:**

closed. The roof downspout is almost the same diameter as the french drain, so the depth of the

drain was not determined.

Waste Type: Stormwater Runoff

Waste Description:

Site Code: 300-192 Classification: Accepted

Site Names: 300-192, 3732 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #349

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1997

Site The site is a french drain that received steam condensate from a quench tank. The drain appears to be made of concrete and is covered by a lid. The foundation of the 3732 Building has been

posted "Fixed Contamination Area." Details of this drain have been obscured by the paint applied for this posting. The outer perimeter of the drain measures 1.2 meters (3.9 feet) by 1.2 meters (3.9 feet) and rises approximately 10 centimeters (3.9 inches) above grade. The lid measures 0.98 meters (3.22 feet) by 0.98 meters (3.22 feet). Where the edges of the lid are visible, it appears as though it has been sealed by the paint. A sign on the lid has been obscured by paint. The site is surrounded by gravel. While visiting an adjacent site on 11/2/98, it was noticed that the 3732 pad had been surrounded by post and chain since the previous walkdown. The barricade was labeled

"Radiological Buffer Area" and "Radiologically Controlled Area."

Waste Type: Steam Condensate

Waste When this stream was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Site Code: 300-193 Classification: Accepted

Site Names: 300-193, 3732 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #419, Injection Well

#15

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1997

Site The site is a french drain that received steam condensate. The drain is a concrete pipe which rises

Description: approximately 5 centimeters (1.97 inches) above grade. The pipe is covered by a 0.98 meter

(3.22 foot) metal lid. The foundation of the 3732 Building is posted "Fixed Contamination Area." The roof of the adjacent 303B Building is posted "Contamination Area." The site is

surrounded by gravel.

Waste Type: Steam Condensate

Waste When this stream was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Site Code: 300-194 Classification: Accepted

Site Names: 300-194, 3734 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #334, F.D. #8

Site Type: French Drain Start Date:

Site Status: Inactive End Date: 1997

Site The site is a french drain. The site is associated with the 3734 Building, which has been demolished. The 3734 Building's concrete pad is still in place and is surrounded by soil and

gravel. There are two small areas of Fixed Contamination adjacent to the pad. No drain was

visible during the site walkdown.

Waste Type: Steam Condensate

Waste When this stream was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Site Code: 300-195 Classification: Accepted

Site Names: 300-195, 3734A Building Steam ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #519

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate. The previous location of the 3734A

Description: Building is currently a cobble-covered area on the east side of the 3705 Building. No drain was

visible during the site walkdown.

Waste Type: Steam Condensate

Waste When this stream was active, the flow rate was less than 3.8 liters per minute (1 gallon per

Description: minute).

Site Code: 300-196 Classification: Accepted

Site Names: 300-196, 3745 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #399

Site Type:SumpStart Date:Site Status:InactiveEnd Date:

Site The site is a condensate sump constructed of concrete, 96.5 centimeters square (38 inches square),

Description: with a 66 centimeter (26 inch) diameter access cover.

Waste Type: Steam Condensate

Waste The waste is steam condensate that has a flow rate of less than 0.19 liters (0.05 gallons) per

Description: minute.

Site Code: 300-197 Classification: Accepted

Site Names: 300-197, 3745 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #398, Injection Well

#5

Site Type:Injection/Reverse WellStart Date:Site Status:InactiveEnd Date:

Site The site is covered with a 147.3 centimeter (58 inch) diameter steel cover. Two pipes exit the

Description: 3745 Building and enter the site. One of the pipes appears to be condensate from steam and the

other pipe is unknown.

Waste Type: Steam Condensate

Waste The waste was steam condensate that had a flow rate of less than 0.19 liters (0.05 gallons) per

Description: minute.

Site Code: 300-198 Classification: Accepted

Site Names: 300-198, 3745 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #397, Injection Well

#1

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a vertical vitrified clay pipe with a steel lid. An eye bolt is fastened to the center of the

Description: lid. The cover needs to be removed to confirm the function of the site.

Waste Type: Steam Condensate

Waste The waste is steam condensate that has a flow rate of 0.19 liters (0.05 gallons) per gallon.

Description:

Site Code: 300-199 Classification: Accepted

Site Names: 300-199, 3745B Building Steam ReClassification: Rejected (9/2/1998)

Condensate, Miscellaneous Stream #380

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The french drain is a 0.6 meter by 0.45 meter (2 foot by 1.5 foot) rectangular concrete pit with a perforated steel cover. About 15 centimeters (6 inches) from the top, a 10 centimeter (4 inch) pipe enters from the direction of the 3745A Building. The drain is at least 0.6 meters (2 feet) deep, with the bottom 15 centimeters full of water. The site will also act as a storm drain for the surrounding compacted graveled area and the nearby roof runoff drainspout. Old wiring conduit rises from the ground next to the drain and enters the drain on the east side. The drain is protected by a yellow steel pipe barricade. The "Inventory of Miscellaneous Streams", Revision 3 lists this stream as eliminated. The lines have been capped. The source has been routed to the process

sewer. It is still active as a stormwater drain.

Waste Type: Steam Condensate

Waste Site appears to still receive storm water runoff.

Description:

Site Code: 300-200 Classification: Accepted

Site Names: 300-200, 3745B Building Steam ReClassification: Rejected (9/2/1998)

Condensate, Miscellaneous Stream #379

Site Type: French Drain Start Date:

Site Status: Inactive End Date:

Site The site is a square concrete pit, 1.2 meters (4 feet) on a side, covered with a solid steel plate.

Description: The site appears to be about 1 meter (3 feet) deep, with the bottom covered in water. A 10-

centimeter (4-inch) iron pipe enters from the south side (from the 3745B Building) and another 10-centimeter (4-inch) pipe is lower, on the west side of the drain, barely extending into the drain. The "Inventory of Miscellaneous Streams", Revision 3 says the stream is eliminated. The pipes have capped. The source has been routed to the process sewer. The water in the bottom is probably old, as there is no air circulation to evaporate the water. The site appears to be a

concrete box with a concrete bottom and the steel lid would prevent evaporation.

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-201 Classification: Accepted

Site Names: 300-201, 3762 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #491, Injection Well

#42

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

The site is a 1 meter (3 foot) diameter concrete pipe in the gravel roadway. A 5 centimeter (2 **Description:** inch) steel pipe comes in at the bottom, from the direction of the 3762 Building. The bottom of

the drain is 0.5 meters (1.5 feet) deep, and covered with small rocks and sand. The drain is protected by a yellow steel barrier made of pipes, which has been bent by traffic over the years.

The drain is covered by a galvanized steel plate with 4 vent holes. The "Inventory of Miscellaneous Streams", Revision 3, says the site is active. However, the 3762 Building is posted as a closed facility, and most (or all) of the old steam lines in the area have been abandoned, so the site may actually be inactive. The site status has been changed to inactive to

reflect information provided by the responsible contractor.

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-202 Classification: Accepted

Site Names: 300-202, 3765 Building HVAC ReClassification: Rejected (12/15/1998)

Condensate, Miscellaneous Stream #345

Site Type: Injection/Reverse Well Start Date:

Site Status: Inactive End Date: 1997

Site The drain is not visible. The 3765 Building has been demolished. A gravel parking lot has been

Description: placed on the location where the building once stood.

Waste Type: Water

Waste The Inventory of Miscellaneous Streams Report states the drain received HVAC condensate.

Description: When this stream was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

minute).

Site Code: 300-203 Classification: Accepted

Site Names: 300-203, 377 Building Steam Condensate, ReClassification: Rejected (9/2/1998)

Miscellaneous Stream #446, Injection Well

#36

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site This drain is visible as an iron plate 0.66 meters (2.17 feet) in diameter, exclusive of the frame.

Description: The site is located in a graveled lot. The plate is stuck closed from rust and sand wedged between

it and its frame. The plate is flush with the ground, but it does not appear that stormwater would drain into it because the ground tilts slightly away from it, and the surrounding ground is not sealed and will let rainwater infiltrate. Site drawings H-3-42084 Sheet 1 and H-3-42085 Sheet 1 show the facility to drain from the valve pit on the east side of the 377 Building, where the steam lines enter. While the "Inventory of Miscellaneous Streams", Revision 3, lists the drain as active, the former facilities manager, Burke Neuman of DynCorp., said that the steam lines have been disconnected and thus the drain is inactive. The facility is closed, and other utilities, such as water

and electricity, are also off.

Waste Type: Steam Condensate

Waste

Description:

Site Code: 300-204 Classification: Rejected (12/15/1998)

Site Names: 300-204, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #378, F.D.

#19, Injection Well #19

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete pipe. The site is covered with a 0.77 meter **Description:** (2.53 foot) steel lid. The lid is posted with a "Confined Space" warning. This french drain is

surrounded by asphalt.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-205 Classification: Rejected (12/15/1998)

Site Names: 300-205, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #377, F.D.

#18, Injection Well #18

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete pipe and covered with a 1.16 meter (3.80 foot)

Description: steel lid. A roof drain pipe is visible near the french drain. The lid is labeled "FD 18" and

"Confined Space." This site is surrounded by cobbles.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, flow rate is less than 0.038

ReClassification:

Description: liters per minute (0.01 gallons per minute).

Site Code: 300-206 Classification: Rejected (12/15/1998)

Site Names: 300-206, 3790 Building Stormwater

Runoff, Miscellaneous Stream #373

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete pipe and covered with a 1.14 meter (3.75 foot)

Description: steel lid. The lid is labeled "Confined Space." The site is surrounded by cobbles. A roof drain

pipe is visible near the french drain.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-207 Classification: Rejected (12/15/1998)

Site Names: 300-207, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #375, F.D.

#16, Injection Well #16

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete pipe and covered with a 1.15 meter (3.77 foot)

Description: steel lid. The lid is labeled "FD 16" and "Confined Space." This french drain is surrounded by cobbles. A roof drain pipe is visible near the french drain. Two metal pipes extending from the

cobbles. A roof drain pipe is visible near the french drain. Two metal pipes extending from the side of the building were also observed. A metal pipe approximately 1.83 meters (6 feet) in length runs parallel to the ground surface, approximately 0.3 meters (1 foot) above the surface. This pipe is part of the fire water test system. A small diameter, short, metal pipe elbow also

extends from the building at the same level as the fire water test pipe.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-208 Classification: Rejected (12/15/1998)

Site Names: 300-208, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #376, F.D.

#17, Injection Well #17

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a french drain constructed of concrete pipe and covered with a 1.15 meter (3.77 foot)

Description: steel lid. The lid is labeled "FD 17" and "Confined Space." A roof drain pipe is visible entering

the french drain. This french drain is behind two bushes and is surrounded by cobbles.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow rate is less than

Description: 0.038 liters per minute (0.01 gallons per minute).

Site Code: 300-209 Classification: Rejected (12/15/1998)

Site Names: 300-209, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #374

Site Type: French Drain Start Date:

Site Status: Active End Date: 1998

Site The site is a drain that receives stormwater runoff. It is located at the bottom of a covered

Description: stairwell. The drain is covered by a 0.31 meter (1.02 foot) metal grid and is surrounded by

concrete.

Waste Type: Stormwater Runoff

Waste The flow rate to the stairwell drain is less than 0.038 liters per minute (0.01 gallons per minute).

ReClassification:

Description:

Site Code: 300-210 Classification: Rejected (12/15/1998)

Site Names: 300-210, 3790 Building Stormwater

Runoff, Miscellaneous Stream #514

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a drain that received stormwater. The site is located at the bottom of a covered

Description: stairwell. The drain is covered by a 0.30 meter (0.98 foot) metal grate and is surrounded by

concrete.

Waste Type: Stormwater Runoff

Waste The flow rate to the stairwell drain is less than 0.038 liters per minute (0.01 gallons per minute).

Description:

Site

January 2004

Site Code: 300-211 Classification: Accepted

Site Names: 300-211, 382 Building Steam Condensate, ReClassification: Rejected (12/15/1998)

Miscellaneous Stream #429

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Description: 1.12 meter (3.67 foot) metal lid. The top of the clay pipe is a few centimeters above grade. The

lid has three holes cut into it and is labeled "Confined Space." A metal pipe approximately 2.5 centimeters (1 inch) in diameter and labeled "LPD-TRP-016" enters the drain through one of these holes. During the site walkdown, steam could be seen rising from the drain and the sound of

The site is a french drain that receives steam condensate. The drain is a clay pipe covered by a

Hanford Site Waste Management Units Report

a liquid being discharged into the drain could be heard.

Waste Type: Steam Condensate

Waste When this site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Site Code: 300-212 Classification: Accepted

Site Names: 300-212, MO010 Building Steam ReClassification: Rejected (9/2/1998)

Condensate Sump, Miscellaneous Stream

#400

Site Type: French Drain Start Date:
Site Status: Inactive End Date:

Site The site is a 121.9 centimeter (48 inch) condensate sump, constructed of concrete and covered

Description: with a steel plate. There are no postings.

Waste Type: Steam Condensate

Waste Steam was produced from sanitary water that had been sent through a water softener system to **Description:** remove minerals (calcium and magnesium). The treated water was introduced into boilers to

produce steam. This steam was superheated before distribution to facilities for heating and process use. Disposal sites received steam condensate from the steam distribution lines. When used for heating purposes, this was a seasonal discharge. Non-regulated chemicals were added

to dechlorinate the water, prevent scale, and control corrosion.

Site Code: 300-213 Classification: Accepted

Site Names: 300-213, West High Tank (Water Tower) ReClassification: Rejected (12/15/1998)

Overflow and Steam Condensate, Miscellaneous Stream #332

Site Type: French Drain Start Date:

Site Status: Inactive End Date:

Site The site is a french drain that received steam condensate and overflow from a water tower. The

Description: drain has a square concrete base covered by two metal grates. The concrete base is approximately

1 meter (3.3 feet) deep. At the bottom of this reservoir is an opening approximately 11

centimeters (4.3 inches) in diameter. Inside the reservoir is a square metal plate held at an angle by two metal rods extending through the grates. Without this support, it appears as though the metal sheet would lay flat at the bottom of the reservoir and block the outlet pipe at the bottom. A metal pipe approximately 11 centimeters (4.3 inches) in diameter extends from the top of the water tower to just above the grates. Three pipes enter the northeast side of the reservoir approximately 0.4 meters (1.31 feet) from its top. The pipes terminate open-ended inside the

reservoir. The site is surrounded by sand and cobbles.

Waste Type: Steam Condensate

Waste When this site was active, the flow rate was less than 0.038 liters per minute (0.01 gallons per

Description: minute).

Waste Type: Water

Waste The site received sanitary water from the water tower.

Description:

Site Code: 300-214 Classification: Accepted

Site Names: 300-214, 300 Area Retention Process Sewer **ReClassification:**

Site Type: Radioactive Process Sewer Start Date: 1953

Site Status: Active End Date:

Site Description:

laboratory facilities (308, 324, 325, 326, 327, and 329 buildings) to the 307 Retention Basins. The Retention Process Sewer (RPS) provides radioactive monitoring and transport of nonhazardous, potentially radioactive process waste. Project L-070 has updated the existing system through cleaning and relining. These activities have yielded a complex gravity, vacuum, and pressurized process sewer collection system. It consists of approximately 53 vacuum collection sumps with vacuum valve pits, and several pumping stations. Two additional buildings

The site is an underground carbon steel and polyvinyl chloride pipeline connecting the 300 Area

house a central vacuum collection station and a satellite area collection station.

Waste Type: Process Effluent

Waste Description:

The waste discharged to the Retention Process Sewer (RPS) is nonhazardous, potentially radioactive waste (not to exceed 5,000 picocuries per liter) from the 300 Area Laboratory facilities. In FY1998, approximately 12 million liters (3 million gallons) flowed through the

RPS to the 307 Retention Basins.

Site Code: 300-215 Classification: Accepted

Site Names: 300-215, 300 Area South ReClassification: Rejected (1/27/1999)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is very large and includes many different features. Much of the site is covered with vegetation such as cheatgrass and sagebrush. Two major roads cross the site: George Washington Way Extension and George Washington Way to Stevens Drive. Many old road traces exist and one major gravel road bisects the site. A gravel pit, and construction materials dumping ground are located in the north section of the site, south of the 300 Area fence, and west of the George Washington Way extension. Vestiges of irrigation canals are found throughout the site. Groundwater monitoring wells are found throughout the site. There is also a drywell (purpose unknown) in the area. Recent debris includes windblown garbage and tumbleweeds. Some older material near an irrigation canal may pre-date Hanford (e.g. porcelain china, battery cores, cans, and glass). A large diameter buried water line installed in the early 1990s is present in the southern part of the site. Underground electrical, water, and telephone lines are present on the site.

Waste Type: Construction Debris

Waste Description:

There is some construction debris in a dumping area. However, there does not appear to be any hazardous waste dumped in the area. Photograph #1 shows some small battery cores. This was a concern to the EPA and asked that they be picked up. As of February 9, 1999, the "Battery Cores" had been picked up and sent to the Centralized Consolidation/Recycling Center.

Site Code: 300-217 Classification: Rejected (1/27/1999)

Site Names: 300-217, 300 Area Laydown Yard ReClassification:

Site Type: Storage Start Date:
Site Status: Active End Date:

Site Description:

The area is currently in use as a laydown area for construction materials. Construction materials observed at the site included Connex boxes, steel pipe, ladders, steel, plastic pipe, wood pallets, insulation material, and railroad ties. Several vehicles were also stored at the site. No wood utility poles were observed and no stains were observed on the soil from temporary storage of wood utility poles. Most material is stored off the ground on racks. An electrical structure is located in the northwest part of the site. The numbers on the structure are: C3X483 on the west side, C3X481 on the north side, and C3-24 on the south side. Four access manholes are present south of the structure. Three of the manholes are 1.22 meters (4 feet) in diameter and the fourth is 0.91 meters (3 feet) in diameter. A 1.22-meter (4-foot) square concrete structure with a metal lid is present about 15.24 meters (50 feet) south of the north side fence. Well 399-04-01 is present on the northeast corner of the site. A minor amount of blown-in paper was observed. A large borrow pit is found south of the site.

Waste Type: Equipment

Waste There is no waste at this site. Waste that had been a concern to Ecology had been removed prior

Description: to the time that the site was entered into WIDS.

Site Code: 300-218 Classification: Accepted

Site Names: 300-218, 314 Building, Engineering **ReClassification:**

Development Laboratory

Site Type:Fabrication ShopStart Date:1943Site Status:InactiveEnd Date:1996

Site Description:

The site is the 314 Building. This building is one of the original World War II era 300 Area, MED/DuPont structures. Several rectangular additions have been constructed along the north side of both 314 and 314B. The building frame work is bolted steel. The gable roof is constructed of corrugated asbestos. Exterior walls and partitions are concrete block. The floor is reinforced concrete with test pits and a basement room at the west end. A small second floor or mezzanine exists at the west end of the building.

The principal utilities were sanitary water and sewer, steam, normal building power, compressed air and process sewer. The building had a wet sprinkler system.

Air conditioning and heating was provided in the office areas along the north side of the building and in the second floor mezzanine through the use of heat pump systems. Evaporative cooling and heating by steam space heaters was provided within the high/open bay area.

Electric service was provided from a 1000 KVA transformer outside the building. Service voltage is 480/277 V. Distribution voltage within the building from dry transformers, is 120/208 V and 120/240 V. A 7.5 ton bridge crane serves the high bay on the south side.

The 314B Stress Rupture Test Facility is attached to the northwest corner of the building and consists of eight small rooms with blow out roof panels and blast doors for the purpose of conducting high pressure experiments.

The facility was placed in standby in June of 1996. The water systems were drained, the sprinkler systems were drained, and the ventilation was shutdown and capped were needed. The facility was cleaned out with the exception of a few large pieces of equipment, which were excessed in place or have storage agreements with the owners. Power remains connected to the facility. Some interest was shown to possibly lease the facility to a private enterprise, but this may be impractical because of the legacy contamination remaining in the high bay.

Permanent equipment for processing, storing or disposing of material or waste consists of pits, sumps, drywells, tanks, trenches, airshafts, and the soil column. All are suspected of being contaminated

Waste Type: Sludge

Waste

There is sludge and dust residue in the building. Sludge was retrieved from a pit and a trench inside the 314 building in 1996. The sludge contained PCB's, lead and mercury at regulated **Description:** levels. Other contaminants included uranium, thorium, cadmium, bismuth, aluminum and

barium. Contaminated soil is likely to be found around the building exterior.

Waste Type: Equipment

Waste **Description:**

The building has contaminated duct work that is posted and contains a large inventory of fixed uranium contamination. The HEPA filtered exhaust system has the potential for radiological contamination and is posted. There is also contaminated equipment and items that are being stored or have been excessed in place.

Waste Type: Asbestos (non-friable)

Waste

The 314 Building is over 50 years old, and as such, its construction materials contain asbestos, mercury switches, light fixtures containing PCB's, and possibly lead based paints. Asbestos may **Description:** be found in tile, insulation, and transite. Significant amounts of asbestos exist in the materials of

construction such as the roof, pipe insulation, etc.

Waste Type: Equipment

Waste **Description:** The building is likely to contain contaminated floor drains, both chemical and radioactive. There is a potential that mercury could exist in some of the older drains and sewer lines. No

known inventory (mercury) has been identified.

300-219 **Site Code: Classification:** Accepted

300-219, 300 Area Waste Acid Transfer **Site Names: ReClassification:**

Line

Site Type: Process Sewer **Start Date: Site Status:** Inactive **End Date:**

This site includes the transfer lines connecting the various components of the 300 Area Waste Site **Description:**

Acid Treatment System (WATS) and the 300 Area Uranium Recovery Operations. The piping, located in the Pipe Trench (300-224), includes: (1) the 333 N Fuels process transfer lines to the process acid waste solution storage tanks in the 333 and 334-A Facilities, (2) the waste transfer lines to the waste treatment facilities in the 313 Uranium Recovery/WATS Neutralization Room, (3) the transfer lines to/from the 313 Building to the neutralized acid waste storage tanks in the 311 Tank Farm, (4) ethylene glycol supply and return lines in the Pipe Trench between the 333 Building and the 313 Building used to heat this portion of the Pipe Trench, (5) fresh acid (nitric

and sulfuric) lines from the 334 Tank Farm to the 333 Building, and (6) caustic lines from the Tank Farm to the 313 WATS/URO Room. As of 11/1/98, all process and waste piping inside the associated facilities had been disconnected from the Pipe Trench; only the piping inside the Pipe Trench or outside the facilities (e.g. tank farm piping) remains for pipes associated with the 300 Area Waste Acid Treatment System or the 300 Area U-Bearing Acid Treatment System.

Site Code: 300-220 Classification: Rejected (1/27/1999)

Site Names: 300-220, Gravel Pit #7, Pit 7 ReClassification:

Site Type:Depression/Pit (nonspecific)Start Date:Site Status:InactiveEnd Date:

Site Description:

The site is a manmade depression identified as Gravel Pit #7. The surface consists of sand and gravel with some cobbles, and a light vegetation cover of bunch grass and small sage. Trace fragments of concrete and asphalt can be found along the depression margins. Although it is included in the general radiologically controlled area north of the 300 Area, there are no site specific radiological postings.

Site Code: 300-222 Classification: Accepted

Site Names: 300-222, 384-W Brine Pit, 384-W Salt ReClassification: Rejected (3/14/2002)

Dissolving Pit and Brine Pump Pit

Site Type: Sump Start Date: 1977

Site Status: Inactive End Date:

Site Description:

The brine pit, a concrete underground storage pit, was cleaned out and filled with sand/gravel in May 1998. At the surface the structure measures 5.18 meters (17 feet) by 3.05 meters (10 feet). It was divided into two sections.

The larger section is the salt dissolving pit, also called "brine pit" on drawings. This section held the salt that was dissolved to make the brine. A 3.8 centimeter (1.5 inch) stainless steel sprinkler pipe runs the length of the pit. A 3.8 centimeter (1.5 inch) PVC (polyvinyl chloride) brine return line enters the pit through its south wall. The bottom of the pit was covered with a 15 centimeter (6 inch) layer of gravel topped by a 15 centimeter (6 inch) layer of sand. Three 2.9 meter (9.5 foot) lengths of 10 centimeter (4 inch) transite tile pipe were located within the gravel layer. These three pipes connected through a dividing wall into the adjacent section. An overflow drain is located near the top of the structure. The salt dissolving pit is identifiable at the surface by its red metal cover.

The smaller section is the brine pump pit, also called "tank" in drawings. A 5 centimeter (2 inch) PVC line exits the pit through its south wall. The brine pump pit is identifiable at the surface by its gray metal cover.

Waste Type: Abandoned Chemicals

Waste Before it was cleaned out, the structure contained salt cake and/or brine, both of which may be

Description: designated as dangerous waste.

Site Code: 300-223 Classification: Accepted

Site Names: 300-223, 384 Powerhouse Fuel Oil Day ReClassification:

Tanks #1 and #2

Storage Tank **Start Date:** 1964 **Site Type:** 1998 **Site Status:** Inactive **End Date:**

The site has been backfilled to grade. Site

Description:

The site was backfilled on March 22, 2003 after the Day Tanks and surrounding contaminated soil had been removed. The tanks were carbon steel, underground storage tanks, positioned horizontally, in a north-south direction.

Waste Type: Oil

Waste **Description:**

Site Code: 300-224 **Classification:** Accepted

300-224, WATS and U-Bearing Piping **Site Names: ReClassification:**

Trench

Site Type: Trench **Start Date:** 1960 **Site Status: End Date:** 1988 Inactive

Site

Description:

The site is a subsurface, concrete pipe trench with concrete block and metal plate covers. The pipe trench has several sections which allow piping connections to be made between process operations in the 313 Building, the 303-F Building, the 311 Tank Farm, the 333 Building, the 334-A Building, and the 334 Tank Farm, as shown in the attached scanned schematic diagram.

The west part of the concrete pipe trench, which connects the 333 Building and the 313 Building, is approximately 188 meters (617 feet) long with internal dimensions of about 45.7 centimeters by 45.7 centimeters (18 inches by 18 inches). This section of the pipe trench has ethylene glycol heating lines used for freeze protection. An access box or valve box with a metal lid abuts the west wall of 333 where the pipe trench emerges from the building. The pipe trench is then covered by concrete lids measuring 1.21 meters by 0.64 meters (4 feet by 2.1 feet). The concrete covers are numbered with # 1 being the closest to the west wall of 333. Some of the covers adjacent to 333 and the 333 West Tank Farm are posted "Fixed Contamination Area." The entire length of the pipe trench is posted "Radioactive Material, Internally Contaminated." The pipe trench runs south along the west side of 333, makes a 90 degree turn to the west at the building's southwest corner, crosses the street, makes another 90 degree turn to the south and runs along the east side of the 3712 Building. A metal access lid is found on the east side of 3712, between the covers labeled # 65 and # 66. This allows access to the pipe trench and the helium lines that used to run between 306W and 3712. The pipe trench makes a 90 degree turn to the west just east of the northeast corner of 303G. It is just west of this turn that the trench runs under a railroad track. The pipe trench then runs along the north side of 303G where an access box or valve pit is located by the northwest corner. The metal lid covering this concrete box measures approximately 0.6 meters by 1.8 meters (2 feet by 6 feet) and is posted "Radioactive Material, Internally Contaminated." The pipe trench continues along the north side of the 311 Tank Farm where there is a second row of concrete lids adjacent and parallel to the pipe trench. The concrete covers in this second row are longer and wider than those covering the pipe trench. The pipe trench makes a 90 degree turn at the northeast corner of 303F and runs along the east side of that building where it makes another 90 degree turn to run through the building. Drawing H-3-10022 shows where the "Acid Sump" was located east of the 303F Building. At one time the sump was lined with acid brick and appears to have been used to collect effluent from the pipe trench, from the vent/overflow of the nitric acid tanks, from the caustic drains, and from the floor drains in the 303F Building (including the various pumping stations). The pipe trench through the 303F

Building is shown on H-3-10037, which also shows a floor drain in the pipe trench. The pipe trench reappears on the west side of 303F at a transfer box and enters the southeast wall of the 313 Building at another transfer box. A steam line, among other things, enters the transfer box on the west side of 303F. The concrete blocks covering the trench between 303F and 313 are much larger, measuring approximately 0.9 meters by 1.2 meters (3 feet by 4 feet). The WATS pipe trench from the 303F to the 313 Building piping wall box is shown on H-3-10157. Drawing H-3-10157 shows the process sewer lines beneath the 313 Building including the WATS pipe trench drain in the floor of the wall box next to the 313 Building. Between the 333 Building and the 313 Building, the pipe trench has 2.4 centimeter (1 inch) diameter weep holes in the bottom of the trench at 6.11 meter (20 feet) intervals to allow precipitation to drain out into the soil at the low points, especially as the pipe trench passed under the railroad tracks. Consequently, leaks to the pipe trench are expected to have resulted in contamination of the ground beneath the length of this section of the pipe trench (see H-3-18530).

The pipe trench passes through the 333 Building. Within 333, the pipe trench is about 64.7 meters (212.5 feet) long with inside dimensions of about 45.7 centimeters by 45.7 centimeters (18 inches by 18 inches) with opening in the metal covers for drain lines from each of the process tanks.

On the east side of 333, the pipe trench emerges just west of the northwest corner of 334A. The pipe trench measures 11.6 meters (38 feet) to the 334A Facility and another 10.7 meters (35 feet) to the 334 Tank Farm. The trench is covered by concrete lids that measure approximately 0.9 meters by 1.5 meters (3 feet by 5 feet). The pipe trench makes a 90 degree turn to the south to run along the west side of 334A, makes another 90 degree turn to the east just west of the northwest corner of 334, then makes another 90 degree turn to the south to run along the west side of 334 and the 334 Tank Farm. The pipe trench within the 333 Building, to the 334-A Facility and to the 334 Tank Farm has an acid brick floor liner. On the west side of the tank farm, the trench is covered by metal plate lids which are perforated with approximately 2.5 centimeter (1 inch) and 5 centimeter (2 inch) diameter holes. Pipes are visible in the trench through these holes. The end of the pipe trench makes one last 90 degree turn to the east, terminating at the process sewer. Previously, the trench had connected to a drain to the underground limestone neutralization pit (300-246) which drained to the 618-1 Burial Ground until 1977 (see UPR-300-14, RL-75-25). Two short segments branch off this section of the pipe trench as it passes under the tank farm. Another segment of the pipe trench forms a "Y" under the tank farm just to the north of this. The total length of WATS pipe trenches within the 334 Tank Farm is about 45.7 meters (150 feet). Valves are visible above the pipe trench where it runs under the tank farm. The 306E Pipe Trench (300-258) connects with the WATS Pipe Trench (300-224) at the southwest corner of the 334 Tank Farm.

Waste Type: Chemicals

Waste The pipe trench and subsurface soil have become contaminated due to multiple releases into the

Description: trench. Releases included acids, bases, and solvents. Some of released acids contained

dissolved uranium. See the "Releases" section for information on the individual releases.

Site Code: 300-225 Classification: Rejected (5/26/1999)

Site Names: 300-225, 3790 Building Stormwater **ReClassification:**

Runoff, Miscellaneous Stream #767

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a drain that received stormwater. It is located at the bottom of a stairwell that is covered with a corrugated metal roof. The drain is covered with a 0.30 meter (1.00 foot) metal

grate and is surrounded by concrete.

Waste Type: Stormwater Runoff

Waste This stream discharges to stream #378

Description:

Site Code: 300-226 Classification: Accepted

ReClassification: Rejected (5/26/1999) **Site Names:** 300-226, 3709A Building Miscellaneous

Stream #768, Drip Station U39

Injection/Reverse Well **Start Date: Site Type:** Inactive **End Date: Site Status:**

The site is covered with a 147-centimeter (58-inch) diameter steel plate. There are four holes in Site

the cover. The drain structure is slightly elevated from the surrounding ground surface. The site is **Description:**

labeled "U-39" and is posted as a "Confined Space."

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than **Description:** 0.038 liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-227 **Classification:** Accepted

Site Names: 300-227, 3709A Building Miscellaneous **ReClassification:** Rejected (5/26/1999)

Stream #769, Drip Station U38

Site Type: Injection/Reverse Well **Start Date: Site Status: End Date:** Inactive

Site The site is covered with a 147-centimeter (58-inch) diameter steel plate. There are four holes in **Description:**

the cover. The site is labeled "U-38" and is posted as a "Confined Space." It is flush with the

surrounding ground in the lawn at 3709-A.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than **Description:** 0.038 liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-228 **Classification:** Accepted

Site Names: 300-228, Miscellaneous Stream #770, Drip **ReClassification:** Rejected (5/26/1999)

Station U28, Steam Trap 3G-U28, HPD-

TRP-026

Site Type: French Drain **Start Date: Site Status:** Inactive **End Date:**

The site is a french drain that received steam condensate. The drain is a concrete pipe covered Site

with a 1.47 meter (4.28 foot) diameter perforated metal plate. The lid is labeled "U-28" and is **Description:**

posted "Danger, Limited Access/Confined Space." The top of the pipe appears to be flush with the ground surface. The site is located on a low rise relative to the surrounding area and is surrounded by sand and gravel. According to the "Inventory of Miscellaneous Streams," Revision

Hanford Site Waste Management Units Report January 2004

1030

3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than **Description:** 0.038 liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-230 Classification: Accepted

Site Names: 300-230, Steam Trap 3G-U44, HPD-TRP- ReClassification: Rejected (5/26/1999)

29, U44, Miscellaneous Stream #771

Site Type: Valve Pit Start Date:
Site Status: Inactive End Date:

Site The site is covered with a 173-centimeter (68-inch) diameter diamond plate steel cover. A square

Description: access hatch is located in the center of the cover. The below grade section is constructed of

concrete with a dirt floor. The interior of the pit contains valves which released steam condensate

to the floor. The site is labeled "U-44" and is posted as a "Confined Space."

Waste Type: Steam Condensate

Waste Steam condensate was discharged to the floor of the pit. According to the "Inventory of

Description: Miscellaneous Streams," Revision 2, the flow was less than 0.038 liters (0.01 gallons) per

minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-231 Classification: Accepted

Site Names: 300-231, Vitrification Test Site ReClassification: Closed Out (5/26/1999)

Transformer Pad, Substation C3-S15

Site Type:Electrical SubstationStart Date:1983Site Status:InactiveEnd Date:1999

Site The site was a transformer station connected to a 13.8 KVA overhead powerline. The

Description: transformers have been removed. The transformers were used to provide electricity for in-situ

vitrification tests at the 300 Vitrification Test Site (300 VTS), a separate WIDS site.

The transformers were located on a concrete pad and enclosed by a chain link fence. The transformers were numbered as follows: transformer #C4804P, serial #81439, property #F176743; transformer #C4805P, serial #81441, property #176744; transformer #C4648P, serial #80097, property #176745. The transformers were single phase 200 KVA. The primary voltage for each of the transformers was 14400 and secondary voltage was 240/480. Each transformer weighed 544 kilograms (1200 pounds). Electric fluid capacity was 492.1 liters (130 gallons) and

the fluid type was mineral oil.

Waste Type: Transformer

Waste The transformers have been removed (5/13/1999). The concrete pad and the surrounding soils

Description: are clean. The only remaining waste is the abandoned concrete pad and fence.

Historical data showed that all three transformers were sampled for polychlorinated biphenyls (PCBs) on 8/18/86. Analysis on C4804P indicated 98 parts per million of PCB. Analysis on C4805P indicated 90 parts per million of PCB. Analysis on C4648P indicated 92 parts per

million of PCB.

Active

Site Code: 300-235 **Classification:** Accepted

300-235, 3713 Building Storm Water **ReClassification:** Rejected (5/26/1999) **Site Names:**

> Runoff and Steam Condensate, Miscellaneous Stream #766

Site Type: French Drain **Start Date:**

The site is a french drain that currently receives only stormwater. The drain is a concrete pipe that Site **Description:**

is covered by a 0.76 meter (2.49 foot) metal lid with perforations. The top of the pipe is flush with the ground surface and is surrounded by soil and gravel. The drain appears to be filled with soil to within approximately 0.7 meters (2.3 feet) of the top of the pipe. The upper 0.45 meters (1.5 feet) of the concrete pipe appear to be lined with some kind of a metal that is pulling away from the pipe. At least two, possibly three, metal pipes were observed extending into the side of the drain from the west. A small diameter (approximately 2.5 centimeters or 1 inch) pipe enters the side of the drain, makes a 90 degree turn and disappears into the floor of the drain. An approximately 5 centimeter (2 inch) open end pipe extends approximately 5 centimeters (2 inches) from the side of the drain. What appears to be a third pipe is covered with cobwebs that could not safely be removed. There are no pipes descending from the overhead steam line in the vicinity of the site. According to the "Inventory of Miscellaneous Streams," Revision 3, the

End Date:

steam source has been shut off.

Waste Type: Stormwater Runoff

Site Status:

According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 3.8 Waste

Description: liters (1.0 gallons) per minute of stormwater only.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than 3.8 **Description:**

liters (1.0 gallons) per minute of nonhazardous/nonradioactive steam condensate. The site no

longer receives steam condensate.

Site Code: 300-236 **Classification:** Accepted

300-236, Steam Trap 3G-U45, HPD-TRP-**ReClassification:** Rejected (5/26/1999) **Site Names:**

020, U-45, Miscellaneous Stream #772

Valve Pit **Site Type: Start Date:**

Site Status: Inactive **End Date:**

Site The site is a valve pit that received steam condensate. The structure has a square concrete base

Description: with a 1.31 meters (4.30 feet) by 1.31 meters (4.30 feet) metal lid. The lid is labeled "U-45" and "Danger, Confined Space." The lid has a hatch that allows access to its interior. The top of the

concrete base ranges from approximately 5 to 10 centimeters (2 to 4 inches) above the ground surface. The site is surrounded by sand and some gravel. According to the "Inventory of

Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow was less than 0.04

Description: liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-237 Classification: Accepted

Site Names: 300-237, Steam Trap HPD-TRP-010, ReClassification: Rejected (5/26/1999)

Miscellaneous Stream #773

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is described as a french drain that received steam condensate. An engineered structure **Description:** was not evident in the field. A steam pipe runs down from the overhead steam line and terminate

was not evident in the field. A steam pipe runs down from the overhead steam line and terminates open-ended centimeters above the ground surface. The pipe is labeled "HPD-TRP-010." There is some soil discoloration where the pipe terminates above the ground surface that appears to be rust stains. This discoloration is confined to a very small area. There is also some rust

discoloration on the concrete base of the pole that supports the steam pipe. The site is surrounded by sand with some gravel. According to the "Inventory of Miscellaneous Streams," Revision 3,

the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than 0.04 liters (0.01 gallons) per minute of nondangerous/nonradioactive per minute of steam condensate.

Site Code: 300-238 Classification: Accepted

Site Names: 300-238, Steam Trap 3G-U24, HPD-TRP- ReClassification: Rejected (5/26/1999)

016, U-24, Miscellaneous Stream #774

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a french drain that received steam condensate from an underground steam line. The drain is a concrete pipe covered by a 1.55 meter (5.09 foot) diameter metal lid. The lid is labeled

"U-24" and "Danger, Limited Access/Confined Space." The site is surrounded by sand and gravel. The site or the nearby steam line are not labeled "HPD-TRP-016." According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow used to be less than 0.04 liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-239 Classification: Accepted

Site Names: 300-239, Steam Trap 3G-U26, HPD-TRP- ReClassification: Rejected (5/26/1999)

058, U26, Miscellaneous Stream #775

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site Description:

The site is a french drain that received steam condensate. The drain appears to be a rust stained concrete pipe covered by a 0.61 meter (2.0 foot) diameter metal lid. The metal lid has some perforations and is labeled "U-26." The top of the pipe ranges from flush with the ground surface to approximately 2.5 centimeters (1 inch) above grade. The site is surrounded by sand and some asphalt. According to the "Inventory of Miscellaneous Streams," Revision 3, the site is inactive, source abandoned.

Waste Type: Steam Condensate

Waste According to the "Inventory of Miscellaneous Streams," Revision 2, the flow was less than **Description:** 0.038 liters (0.01 gallons) per minute of nondangerous/nonradioactive steam condensate.

Site Code: 300-240 Classification: Rejected (5/26/1999)

Site Names: 300-240, 314 Building Stormwater Drain, **ReClassification:**

Miscellaneous Stream #789

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site Description:

The site is a french drain that receives stormwater runoff. The drain appears to be constructed of concrete and is covered by a 0.64 meter (2.10 foot) metal grate. The grate is stamped "STD 42" and its edge seems to be sealed. The drain appears to be approximately 30 centimeters (1 foot) deep. The bottom is covered with sand and gravel. An approximately 10 centimeter (4 inch) diameter pipe enters the west side of the drain, makes a 90 degree turn towards the ground surface, and terminates with a screened opening. The top of the drain is flush with the ground surface, which is slightly depressed relative to the surrounding area. It appears as though the drain would collect runoff from the asphalt on the north side of 314 and from the gravel area southeast of 305B. During the December 17, 1998, walkdown, the inside of the drain appeared to be damp. The drain is surrounded by broken concrete, gravel and cobbles. The 314 Building is a closed facility. There is a similar structure west of this site, southeast of the southeast corner of 305B, south of the fenced area.

Waste Type: Stormwater Runoff

Waste According to the "Inventory of Miscellaneous Streams," Revision 3, the flow is less than 0.038

Description: liters (0.01 gallons) per minute of stormwater only.

Site Code: 300-241 Classification: Rejected (5/26/1999)

Site Names: 300-241, 320 Building Irrigation Line **ReClassification:**

Effluent, Miscellaneous Stream #790

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a 60 centimeter (2 foot) diameter, sprinkler valve pit. There is a water valve inside.

Description:

Waste Type: Water

Waste This site receives less than 0.038 liters (0.01 gallons) per minute of effluent from irrigation.

Description:

Site Code: 300-242 Classification: Rejected (5/26/1999)

Site Names: 300-242, 325 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #791

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

SiteThe site is a concrete box that received drainage from the 325 Building. The box is a ground level, square, concrete structure with a steel cover. It measures approximately 0.9 meters (3 feed)

by 0.9 meters (3 feet) and is approximately 0.6 meters (2 feet) deep. A large diameter carbon

steel line coming from the basement of the 325 Building terminates inside the structure.

Waste Type: Stormwater Runoff

Waste According to the Inventory of Miscellaneous Streams, Revision 3, the site receives less than

Description: 0.038 liters (0.01 gallons) per minute of stormwater only.

Site Code: 300-243 Classification: Rejected (5/26/1999)

Site Names: 300-243, 318 Building Stormwater Runoff, **ReClassification:**

Miscellaneous Stream #792

Site Type: French Drain Start Date:
Site Status: Active End Date:

Site The site is a rectangular grate in the pavement. Water was observed in the bottom of the drain

Description: during a site walkdown on December 14, 1998.

Waste Type: Stormwater Runoff

Waste The site receives less than 0.038 liters (0.01 gallons) per minute of stormwater only.

Description:

Site Code: 300-244 Classification: Rejected (5/26/1999)

Site Names: 300-244, 318 Building Stormwater Runoff, ReClassification:

Miscellaneous Stream #793

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a horizontal, metal culvert that protrudes from the ground in a gravel depression. The

Description: pipe runs under the asphalt driveway, westward toward the 318 Building.

Waste Type: Stormwater Runoff

Waste The site receives less than 0.038 liters (0.01 gallons) per minute of stormwater only.

Description:

Site Code: 300-248 Classification: Accepted

Site Names: 300-248, 340B Steam Condensate Sump Pit ReClassification: Rejected (5/26/1999)

Site Type: Sump Start Date:
Site Status: Inactive End Date:

Site Description:

The site is a sump that collected condensate from process steam. The visible structure is approximately 1.22 meters (4 feet) in diameter, with an entry hatch. Originally, the sump was

open to the ground under the building. Later the bottom was filled with concrete

Waste Type: Steam Condensate

Waste Description:

Steam was used to decontaminate rail cars at the 340B building. The steam condensate sump collected condensate from the process steam. The contaminated solution that resulted from steam cleaning the railcars was flushed into a different drain that led to the Process Sewer.

Site Code: 300-249 Classification: Accepted

Site Names: 300-249, 304 Building, Residual Rad **ReClassification:**

Contamination

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1995

This site is the residual radioactive contamination at the 304 Building that was not closed out as

Description: part of the 304 Concretion Facility.

The 304 Building was designed and constructed in 1952. The main building is metal and rests on a concrete pad. The ceiling has exposed steel trusses (girders). The north and south ends of the building have sliding doors, and there are windows in the east side. Regular doors are located on the north and west sides. The building has no interior insulation or wallboard.

Waste Type: Chemicals

Waste Description:

Residual uranium contamination remains in the building from its past use as a concretion facility.

Site Code: 300-250 Classification: Rejected (5/26/1999)

Site Names: 300-250, Valve Pit Southeast of 303A **ReClassification:**

Site Type:Valve PitStart Date:Site Status:ActiveEnd Date:

Site The site is a valve pit for a sanitary water line. The pit has a rectangular concrete base covered by **Description:** a 1.12 meter (3.67 foot) by 1.42 meter (4.66 foot) metal lid. The top of the concrete ranges from

a 1.12 meter (3.67 foot) by 1.42 meter (4.66 foot) metal lid. The top of the concrete ranges from 11 to 20 centimeters (4.3 to 7.9 inches) above the ground surface. The site is surrounded by sand and gravel. The lid is posted "Confined Space." Both "W 26" and "W 16" are written in fading paint on the lid. The overhead steam line terminates and is capped at the north edge of the 3717B Building. The site is just south of the "Radiologically Controlled Area" signs around the 303A,

304 and 303B Buildings.

On December 10, 1998, a DynCorp employee removed the lid of the structure just described, allowing access to its interior. The pit is approximately 0.9 to 1.2 meters (3 to 4 feet) deep and has a gravel-covered bottom. An approximately 5 to 7.6 centimeter (2 to 3 inch) pipe runs across the pit from east to west. Two valves were visible in the pit. There are no drains.

Site Code: 300-251 Classification: Accepted

Site Names: 300-251, Unplanned Release Outside the **ReClassification:**

303-K Building

Site Type: Unplanned Release Start Date: 1943

Site Status: Inactive End Date:

Site The site consists of uranium contaminated soil around and under the 303-K Building (also known

Description: as the 303-K Contaminated Waste Storage). The 303-K building was removed and clean closed

on July 22, 2002.

Waste Type: Soil

Waste The waste is contaminated soil from operations at the 303-K Contaminated Waste Storage

Description: Facility.

The following information is provided about operations inside the facility. Since 1943, the building has been used to store various amounts of low-level radioactive wastes. Solids are stored outside, while liquids are contained inside the building. Mixed waste stored after January 1986 included: a. Neutralized solid waste for the unrecoverable uranium stream of the 300 Area Waste Acid Treatment System, b. Uranium contaminated metallic lead, c. Salt and sludge containers from beta and quench metal heat treatment furnaces, d. Uranium contaminated perchloroethylene, chloroform, and ethyl acetate, e. Beryllium/zircaloy-2 alloy chips and fines generated at the stepcut lathe, before and after concreting at the 304 Concretion Facility, f. Spent coolant from counterbore lathes in the 333 Building, g. Waste oil and hydraulic fluids that are known, or strongly suspected, to be contaminated with uranium, h. Salt crystals (copper fluorozirconate) from the bottom of the waste storage tanks in the 334-A Building, i. Acids (HNO3, HF, and H2SO4 mixtures) as a solution and sorbed on opal clay. Analyses of soil samples taken in 1977 for RCRA closure resulted in the conclusion that there are no metals or semivolatile organic constituents of concern present in the soil.

Site Code: 300-253 Classification: Accepted

Site Names: 300-253, 384-W Original Brine Pit, 384-W ReClassification: No Action (5/26/1999)

Original Salt Dissolving Pit and Brine

Pump Pit

Site Type: Sump Start Date:

Site Status: Inactive End Date: 1977

Site The site was a two-chambered concrete structure. No surface features were noted at the **Description:** structure's location except a patch of asphalt that was darker than the surrounding material.

The structure was located partially below grade with the top 83 centimeters (33 inches) visible. It

had either a concrete or metal lid (see Site Comment).

The larger chamber, was the salt dissolving pit, also identified as the "Salt Storage Pit" on drawing H-3-36240. This section held the salt that was dissolved to make the brine. Typically, the salt dissolving pit was connected to the brine pump pit by a piece of perforated pipe located at the bottom of the structure. The pipe was covered by layers of gravel and sand.

The smaller chamber was the brine pump pit, also identified as "brine" on drawing H-3-36240. This chamber held the filtered brine for use in powerhouse operations. The pump pit was connected to the powerhouse by a 5.1 centimeter (2 inch) line and a 2.5 centimeter (1 inch) line.

Waste Type: Abandoned Chemicals

Waste Description:

Salt cake may be present as part of any demolition debris at the site. Salt cake may be designated as a dangerous waste under the Model Toxics Control Act (MTCA).

Site Code: 300-255

Classification: Accepted

Site Names:

300-255, 309 Tank Farm Contaminated Soil **ReClassification:**

Site Type: Unplanned Release

Start Date: 1960

Site Status:

Inactive End Date: 1969

Site Description:

The site is contaminated soil located inside the 309 Building Tank Farm fenced area. The source of the contamination was probably the piping related to tanks 309-TW-1, 309-TW-2 and 309-TW-

3.

The 309 Tank Farm houses three underground holdup tanks (WIDS Sites 309-TW-1, 309-TW-2 and 309-TW-3) covered by a protective concrete pad, an underground concrete covered valve pit, above and below ground transfer pipelines, an ion exchange vessel, a control panel, and a large access area of mixed sand and gravel. In 1996, the Tank Farm area and associated hardware and fixtures were surveyed, sampled, assayed, video taped, or otherwise characterized. The purpose of this work was to establish the radiological status of the Tank Farm as preparatory work to cleanup actions.

Waste Type:

Soil

Waste Description:

The waste is contaminated soil. Potential radioactive contaminants of concern are cesium-137, cobalt-60, and americium-241. Potential hazardous contaminants are barium, cadmium,

chromium, lead, and selenium.

The related contaminated structures, e.g., tanks, valve pit and ancillary piping will need to be removed under a decontamination and decommissioning action prior to soil remediation. The tanks, 309-TW-1, 309-TW-2, and 309-TW-3 are separate sites in WIDS.

Site Code: 300-256

Classification: Accepted

Site Names:

300-256, 306E Fabrication and Testing

ReClassification:

Laboratory Releases

Site Type: Unplanned Release

Start Date: 1956

Site Status: Inactive

End Date:

Site

The site is contaminated soil under and around the 306E Building. The area around the 306E

Description: building is paved and posted as having underground radioactive contamination.

Waste Type: Soil

__

Waste Description:

The waste is contaminated soil under and around the 306E Building.

Site Code: 300-257 Classification: Accepted

Site Names: 300-257, 309 Process Sewer To River

ReClassification:

Site Type: Process Sewer

Start Date:

Site Status: Inactive

End Date:

Site Description:

The site is process sewer piping that was originally connected to the 309 Building's Rupture Loop Holding Tank. The tank was removed in the late 1970's. Gerber states that at the same time the Rupture Loop Holding Tank was removed to a 200 Area burial ground, all Radioactive Liquid Waste Sewer (RLWS) connections were severed and plugged. The area where the Rupture Loop Holding Tank was located is now covered with asphalt and is being used as a parking lot.

The tank had a set of incoming piping that included a 7.6 centimeter (3 inch) steel process sewer pipeline and a 10.2 centimeter (4 inch) steel vent pipeline. The outgoing piping was more complex in that there were two outgoing pipelines that were interconnected in a valve box. One 7.6 centimeter (3 inch) steel pipe run started at the pump on the center top of the tank and ran to the valve box. This pipeline was for pump discharge and was the means of lowering the tank level.

The second pipe was a 15 centimeter (6 inch) steel overflow pipe that drained to manhole #3. This pipe exited the tank 22.9 centimeters (9 inches) from the top of the tank.

The valve box (pit) was a 1.8 meter by 1.8 meter (6 foot by 6 foot) mostly below grade concrete box with a gravel bottom. The valve box had a manhole and ladder for direct access to the valves. There were also three grade level openings in the top of the valve box for access to the valves with a gate key. It is unknown if the valve box remains in place. The valve box was located approximately 2.1 meters (7 feet) from the Rupture Loop Holding Tank. It may have been removed at the same time as the tank.

There was one 7.6 centimeter (3 inch) incoming pipeline to the valve box and two 7.6 centimeter (3 inch) exit pipelines. Contaminated waste water was diverted at the valve box to the high level waste pipeline that went to the 340 Complex. Uncontaminated water was sent to the process sewer where it teed into the overflow pipeline. At manhole #3, five pipelines converge and flow into a 1 meter (36 inch) 10 gauge corrugated steel pipeline that flowed to the Columbia River. The five pipelines that enter manhole #3 are all process sewer piping with the following sizes and descriptions: 1) a 15.2 (6 inch) steel pipeline from the Rupture Loop Holding Tank overflow line and the valve box, 2) a 30.5 centimeter (12 inch) vitrified clay pipe coming from the 309 Building, 3) a 30.5 centimeter (12 inch) steel line with a 5.1 centimeter (2 inch) condensate drain above the steel pipeline from the 309 Reactor, 4) a 0.76 meter (2.5 foot) steel pipeline from the Condenser Facility (demolished), and 5) a 15.2 centimeter (6 inch) vitrified clay pipe from the 309 Building. According to DOE/EIS-0113, the streams from the 309 Building included cooling water from air conditioning chillers and floor drains from the south basement service area.

The corrugated steel pipe enters a manhole (overflow structure) at the top of the river bank. The structure is 3.8 meters (12.5 feet) deep with the invert to the structure at 1.9 meters (6.2 feet) from the top of the open grate cover. The pipe exits at a depth of 3.8 meters (12.5 feet) on the opposite side of the structure (going towards the river). No pipeline is visible on the river bank or at the edge of the river. DOE/EIS-0113 shows the top view and the profile of this pipeline. The pipeline from the overflow structure (concrete box) is covered by 3.15 meters by 3.15 meters by 0.9 meters (10 feet by 10 feet by 3 feet) deep riprap. Additional riprap has been placed at the terminus of the pipe. At the pipeline terminus there is a minimum of 1.2 meters (4 feet) of riprap cover over the pipeline. This pipeline was identified as discharge No. 014 309 Building Outfall Structure Columbia River Mile 344.5.

According to Nat Harding (Water Utilities), the corrugated pipe has collapsed (due to deterioration) in some places causing subsidences and has had to be filled with dirt.

Waste Type: Equipment

Waste Description:

The waste is a pipeline that carried potentially radioactively contaminated water to the river.

Site Code: 300-258 Classification: Accepted

Site Names: 300-258, Abandoned Pipe Trench Between **ReClassification:**

334 Tank Farm and 306E

Site Type:TrenchStart Date:1960Site Status:InactiveEnd Date:1975

Site Description:

The site is an abandoned subsurface concrete pipe trench. The top of the pipe trench is level with the ground surface and is covered with metal plates that measure approximately 0.9 meters by 0.3

meters (3 feet by 1 foot). The metal plates are posted "Radioactive Material, Internally

Contaminated." Between the 306E Building and the fence south of the 333 Building, the trench is surrounded by asphalt. The metal cover plates and concrete walls are constructed to allow vehicle traffic on the north side of the 306E Building to drive over the pipe trench. Between the 333 Building fence and the 334 Tank Farm, the trench is primarily surrounded by gravel. The pipe trench is covered by solid plate over most of its length. However, approximately 10 meters (32.8 feet) at the north end have metal plates with approximately 5 centimeter (2 inch) holes. Pipes are

visible through these holes.

Site Code: 300-259 Classification: Accepted

Site Names: 300-259, Contamination Area Surrounding **ReClassification:**

618-1 Burial Ground

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The Contamination Area (CA) is posted with light posts and plastic chain that encompasses the

Description: 618-1 Burial Ground. The concrete markers for the burial ground (WIDS Site 618-1) can be seen inside the Contamination Area chain. The Contamination Area and Burial Ground are both covered with gravel. A concrete pipe trench (WIDS Site 300-258) and a concrete storage pad

(WIDS Site 333 LHWSA) are also located inside the Contamination Area.

Waste Type: Misc. Trash and Debris

Waste Description:

Site Code: 300-260 Classification: Accepted

Site Names: 300-260, Contaminated Soil West of 313 ReClassification:

Building

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is no longer radiologically posted. It is currently surrounded by light posts and a yellow

Description: rope, but no signs of any kind are present. A small amount of equipment and large wooden boxes

are stored inside the roped area.

Site Code: 300-261 Classification: Accepted

Site Names: 300-261, 315 Filter Plant Process Sewer to ReClassification: Rejected (5/26/1999)

River

Site Type: Process Sewer Start Date:

Site Status: Active End Date:

Site The sewer is constructed of a 0.61 meter (24 inch) vitrified clay pipe from the building to the river

Description: bank. A 0.8 meter (30 inch) corrugated steel flume (1/2 pipe) conveys the effluent down the riverbank and into the river. There is an active stormwater drain located on the west side of the

riverbank and into the river. There is an active stormwater drain located on the west side of the road and due east of the outfall flume. This site has been identified as outfall 012 in DOE/EIS-

0113.

Waste Type: Water

Waste The waste is a process sewer pipeline that received overflow and filter backwash from the 315 **Description:** Filter Plant. Treatment chemicals included alum (aluminum sulfate), chlorine, and separan (a

Filter Plant. Treatment chemicals included alum (aluminum sulfate), chlorine, and separan (a polyacrylamide -flocculent). The site no longer receives material from the 315 Filter Plant. It

can receive stormwater.

Site Code: 300-262 Classification: Accepted

Site Names: 300-262, Contaminated Soil West of South ReClassification: Closed Out (7/23/2003)

Process Pond

Site Type:Unplanned ReleaseStart Date:1943Site Status:InactiveEnd Date:1975

Site The site has been remediated and closed out.

Description:

Waste Type: Soil

Waste The waste is radioactively contaminated soil. The survey report indicates readings up to 15,000 **Description:** disintegrations per minute (dpm) Beta/Gamma. The contamination is suspected to be scrapings

disintegrations per minute (dpm) Beta/Gamma. The contamination is suspected to be scrapings from the 316-1, South Process Pond. Potential contaminants of concern may be the same as those for 316-1, including uranium-238 and cobalt-60. Other contaminants may be copper,

chromium, ammonia, and polychlorinated biphenyls (PCBs).

Site Code: 300-263 Classification: Accepted

Site Names: 300-263, 324 Building Diversion Tank **ReClassification:**

Site Type:Catch TankStart Date:1969Site Status:InactiveEnd Date:1969

The site is an inactive catch tank. The tank was set up to hold contaminated process solutions that were too hot to send directly to the crib (316-3?) without additional treatment. After the tank was

were too hot to send directly to the crib (316-3?) without additional treatment. After the tank was put on line, it was intended to be used as a diversion tank in the event of a radioactive release

from the facility (324 Building).

Shortly after the tank was installed, the 340 Complex came on line. At that time, the piping system to the diversion tank in the 324 yard was bypassed and capped. Since that time, the 324 Building has transferred its waste to the 340 Complex. Drawing H-3-28455 shows the isolation of

the system and has been visually verified at the caissons.

Waste Type: Equipment

Waste Description:

The waste is an inactive tank. Hazardous or radioactive waste was never transferred from the 324 Building to the tank. The tank is isolated and the pipelines are capped.

Sample results, Sample Id S8171-01, indicated cesium-137 to be 509 picocuries per liter (13.9% counting error). Gross Beta was 1,700 picocuries per liter (10% method error).

At the time the site was sampled, there was 15.2 centimeters (6 inches) of rainwater. The water is believed to have come from intrusion because many of the flange bolts were missing. The site is located in a low area where pooling of water can occur. The contamination is believed to be from surface contamination. This site lies in the middle of WIDS Site 316-3, 307 Disposal Trenches.

Site Code: 300-264 Classification: Accepted

Site Names: 300-264, 327 Building, Postirradiation **ReClassification:**

Testing Laboratory (PTL)

Site Type: Laboratory Start Date: 1953

Site Status: Active End Date:

Site Description:

The 327 Building is also known as the Postirradiation Testing Laboratory (PTL). The facility is in a stabilization and deactivation phase, where radioactive material and contamination is being removed and cleaned to allow for future Decontamination and Decommissioning (D&D) activities. While the post irradiation tests that the building was intended for are no longer active, the stabilization and deactivation work is in progress. Many places in the building are well-posted as contamination and radiation areas. While equipment used in the current activity is staged throughout the building, and many rooms are used for equipment storage before excessing or disposal, the building is kept in a neat and orderly manner.

The facility is a one-story structure with a basement. The building has four major areas: 1) the Canyon, 2) the Transfer and Storage Area (also known as the Truck Lock), 3) the Northwest Storage Pad, and 4) the Basement.

The Canyon is the main work area, with 12 shielded Hot Cells, a Dry Storage Unit, and a Wet Storage/Transfer Basin. The entire Canyon area, including support areas, is controlled as a Radiation Area/Contamination Area. The Hot Cells are posted as Very High Radiation Areas because of the large inventories of irradiated materials in each cell. Ten of the cells (A through I, and the Special Environmental Radiometallurgy Facility [SERF]) are constructed of cast iron or steel, and have viewing windows and manipulators. The other two, smaller cells are made of lead bricks and are attachments to the B and I cells. Canisters with radioactive material that remain in the cells from previous studies are transferred to A-Cell for crushing and packing for later disposal. Records of the canister contents from their initial acceptance to the building are used to keep track of and inventory the materials for eventual disposal. A-Cell through I-Cell and the SERF Cell have stainless steel trays on the floor that slope to built-in Radioactive Liquid Waste System (RLWS) drains, which are no longer in service. Isopropyl alcohol tanks are reported to be under the C and E Cells, but are not visible.

The Dry Storage Unit was used to archive small samples that had the potential for further examination, and to hold structural material test specimens removed from irradiated assemblies. The Dry Storage facility is a steel-lined, reinforced concrete tank that extends to the basement, with the top flush with the Canyon floor. It is not accessible to personnel. Process knowledge indicates that the tank is grossly contaminated with both alpha and beta-gamma radionuclides from failed containers. Visual inspection with the periscope confirmed the presence of loose material (Landsman et al 1998). From the canyon floor, all that is visible are 5 upright pipes with controls on top, which are used to maneuver the inner storage trays, and 6 ports in the floor used

to access the material.

The Small Transfer Basin is used for receipt of radioactive materials and can receive samples transferred out of the A-Cell through a connecting transport tube. A canal connects the Small Transfer Basin to the Large Storage Basin in the Transfer and Storage Area. There is a jib crane for each basin (large and small). The jibs are used to move the material to the canal that is common between the two basins. Hand tools are used to move the material through the canal. Materials stored in the Large Storage Basin are grossly contaminated with alpha and beta-gamma radionuclides. The basins at present are almost entirely empty of materials, but remain full of water

Also in the Canyon area are Room #16 (Burst Test Room) and Room #20 (Decontamination Room). The Burst Test Room is used to store manipulators and tools. It is called the Burst Test Basin because it once held a large wet basin used to perform pressure tests of reactor components and fuel assemblies. The basin was backfilled and capped with concrete in the 1950s or 1960s, and is now indistinguishable from the rest of the floor. Routine surveillance indicates contamination levels are below detection. Wrapped pipes near the ceiling are labeled with "Asbestos-free" stickers. The room is now used for storage of equipment.

The Decontamination Room is used as a decontamination area, and contains a double fume hood and an ultra-sonic sink (no longer used). The Decontamination Room continues to be used to decontaminate manipulators and other facility materials. Decontamination is primarily done by hand. Routine surveillance indicates contamination levels are below detection. This area is used to stage equipment used in the stabilization activities.

The Transfer and Storage Area is on the west end of the Canyon, and is used to receive and ship materials, equipment, and supplies, to store irradiated materials in the large water basin, and to compact low-level waste generated in the facility. The Low-Level Waste Compactor, located in the southwest corner of the Transfer and Storage area, compacts waste into 208-liter (55-gallon) drums. The Transfer and Storage area also contains a decontamination chamber (no longer used) with a permitted air exhaust, and a water filtration system designed to remove radionuclides from the basin water. A large roll-up door at the west end of the building opens to the outside, and allows vehicle access into the transfer area.

The Northwest Storage Pad is used to store empty casks, compacted waste drums awaiting shipment, and other controlled equipment that would not be affected by outside exposure. An enclosed solvent and acid storage facility is also on the cask pad. The fenced area is posted as a Radiological Controlled Area (RCA). The east half of the pad is also posted as a Radioactive Material Area (RMA)/Radiation Area (RA). In the southwest corner of the building is another fenced storage area, used to hold a Conex box and radioactive drums prior to shipment. The parts of this fenced area that holds the drums is posted as a RMA.

The 327 Basement is separated into 3 distinct areas. The north third is used to store supplies, idle equipment, cell plugs, and includes the SERF Cell storage. Legacy wastes (that is, buckets with pieces of Transuranic Waste [TRU]) are currently being staged in this area pending disposal. Access to this area is only available through the SERF Cell on the main level.

The middle of the basement houses the hot cell ventilation ductwork, HEPA filters for the hot cells, and the activated charcoal filtration system. The activated charcoal filtration system does not currently have filters installed because there are no programmatic or regulatory needs. An access hatch to a crawl space containing building steam pipes is also in this area.

The south third of the basement is physically separated from the rest of the basement by a wall. The cold side equipment room is in this area, and contains the building hot and cold exhaust, supply fans #1 & #2, facility air inlet system supply, Retention Process Sewer system diverter,

stack monitoring system, stack base plenum and related equipment, vacuum air sampling system and pumps, and steam system components

Waste Type: Equipment

Waste Waste material is contained in ducts, filters, and piping. A 1995 assessment showed most **Description:** gamma activity was due to Cesium-137, Cesium-134, Europium-154, and Cobalt-60.

Approximately 170 grams (maximum) of plutonium is estimated to be in the ducts, piping and other locations in the building, with an additional 314 grams estimated to be in the cells.

Site Code: 300-265 Classification: Accepted

Site Names: 300-265, Pipe Trench Between 324 and **ReClassification:**

325 Buildings

Site Type: Radioactive Process Sewer Start Date: 1971

Site Status: Inactive End Date:

The site is a 5 centimeter (2 inch), underground encased stainless-steel waste transfer line encased within a 10 centimeter (4-inch) fiberglass-reinforced epoxy pipe. The pipeline has a downward

slope of about 0.5% from the 325 Building to the 324 Building. Inside the pipeline are two other stainless-steel Schedule 40 pipes, one is 3/8 inch and the other is 3/4 inch. The inner pipes were driven through the 5 centimeter (2 inch) pipe several years after the larger pipe was installed.

The route of the pipeline is marked at the ground surface and is totally within the exclusion area to prevent accidental excavation. The depth of the pipeline ranges from 1 to 4 meters (3 to 12 feet) underground.

The encasement surrounding the two smaller pipelines was used both for secondary containment and as a route for transfer of the process off-gas for discharge through the 324 Building stack. Before venting through the stack, it flowed into B Cell and was treated with the B Cell ventilation exhaust.

Waste Type: Process Effluent

Waste The transfer line carried liquid High Level Waste from spent nuclear fuel processing.

Description:

Site Code: 300-266 Classification: Accepted

Site Names: 300-266, Soil Under 3728 Building Drain ReClassification: Rejected (3/8/2001)

Pipe

Site Type: French Drain Start Date:

Site Status: Active End Date:

Site Status: Active End Date:

Site The site is soil below a 5-centimeter (2-inch) black plastic drain pipe on the southwest corner of the 3728 Building. In October, 1999, a white plastic bucket was placed under the drain pipe to

the 3728 Building. In October, 1999, a white plastic bucket was placed under the drain pipe to catch any water draining out. The soil under the pipe is lightly graveled (as is the larger area around the entire building), with some of the gravel directly under the pipe washed away. The

soil is not discolored. No engineered structure was built as an injection well.

Site Code: 300-267 Classification: Accepted

Site Names: 300-267, French Drain on Northeast Corner ReClassification: Rejected (3/8/2001)

of 3728 Building

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a concrete slab with a square pit at the end. The pit is 0.6 meters (2 feet) on a side, and

Description: filled with small pea gravel. A galvanized, 3.2-centimeter (1.25-inch) pipe comes from the

building and enters the pit.

Site Code: 300-268 Classification: Accepted

Site Names: 300-268, 3741 Building Foundation; **ReClassification:**

Special Machine Shop; Box Storage

Building Foundation

Site Type:FoundationStart Date:1944Site Status:InactiveEnd Date:1956

Site The building has been removed. The building site is covered with gravel. There are no visual

Description: signs or markers to indicate where the building footprint had been located. The site cannot be precisely located without geophysical scans or excavation. The entire 300 Area is a posted

Underground Radioactive Material area. There is no separate radiological posting for this site.

Waste Type: Demolition and Inert Waste

Waste The contamination related to this building were a result of passive dust from machining

Description: irradiated uranium, graphite, and other metallic samples from the 305 Test Pile. The

contamination, if remaining, would be associated with any remaining concrete foundation.

Site Code: 300-269 Classification: Accepted

Site Names: 300-269, 331-A Virology Laboratory **ReClassification:**

Foundation

Site Type:FoundationStart Date:1972Site Status:ActiveEnd Date:1995

Site The site is a rectangular concrete building foundation. New air conditioner units are installed on

Description: the concrete foundation to support the adjacent 331 facility.

Waste Type: Equipment

Waste Residual contamination may be on the pad from past releases at the building.

Description:

Site Code: 300-270 Classification: Accepted

Site Names: 300-270, Unplanned Release at 313 **ReClassification:**

Building

Site Type:Unplanned ReleaseStart Date:2000Site Status:InactiveEnd Date:2000

Site **Description:** The "unplanned release" reported by the Government Accountability Project and sampled by the Washington Departments of Ecology and Health is a milky-white flow of water that came out of a pipe located below the loading dock on the east side of the 313 Building. The dock is used by Richland Specialty Extrusions to store cylinders of metal (e.g., aluminum). The pipe drains stormwater from the roof of the 313 Building. The release was on to the surface of the ground, in an area of compacted gravel and soil. This area adjoins a paved parking lot.

Waste Type: Soil

Waste **Description:** The stormwater is nondangerous and nonradioactive. Soil collected from the area near the pipe showed elevated levels of lead. The contaminated soil was not caused by the milky-white

liquid. The source of the lead contamination is unknown.

Site Code: 300-271 **Classification:** Accepted

Site Names: 300-271, 324/327 Buildings 90 Day **ReClassification:** Rejected (9/14/2000)

Storage Pad, HS-027

Storage Pad (<90 day) **Start Date:** 1997 **Site Type: End Date:** 2000 **Site Status:** Inactive

Description:

The dangerous waste was kept in a connex box commercially manufactured for storing wastes. The box has a spill containment system in that the waste was stored on a grate at the level of the door threshold, and any spills would be contained under the grate so they could not spill out the door. The box is still in place, but is now used to store hazardous material intended for future use, such as roofing material, propylene glycol (trade name Dow Frost), and oils.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Wastes stored at this 90 Day Pad include absorbed gasoline, oils (possibly contaminated with

heavy metals), ice melt (sodium chloride), toluene, and PCBs. **Description:**

Site Code: 300-272 **Classification:** Accepted

Site Names: 300-272, Underground Storage Tank Near **ReClassification:** Closed Out (11/4/2002)

the 377 Building

Storage Tank Site Type: **Start Date: Site Status:** Unknown **End Date:**

The site was an underground storage tank in a gravel field. The tank was removed in 2002. Site

Description:

Waste Type: Oil

Waste

Upon initial investigation of the UST site, an odor of fuel oil or diesel was noted when the fill **Description:** tube extending above the ground surface was opened. Subsequent sampling and analysis of the

tank contents in December 2001 indicated the liquid to be water with the impurities listed in the

WSCF Analytical Results Report (See Field Work entry).

Site Code: 300-273 **Classification:** Accepted

Site Names: 300-273, Fuel Oil Transfer Pipeline, 366 **ReClassification:**

Bunker Pipeline

Product Piping Start Date: 1964 Site Type: **Site Status:** Inactive **End Date:** 1998

The site is an encased underground pipeline. The encased pipeline contains two 7.6 centimeter (3 Site

inch diameter) stainless steel lines. It is not visually marked on the surface. **Description:**

Site Code: 303-K CWS **Classification:** Accepted

303-K CWS, 303-K Contaminated Waste **Site Names: ReClassification:** Closed Out (8/5/2002)

Storage

1943 **Site Type:** Storage **Start Date:**

Site Status: Inactive **End Date:**

The site has been demolished and clean closed as of July 22, 2002. The building site appears as a Site

Description: weedless gravel lot.

> The 303-K Facility included a former concrete and cinder block building with no windows, outdoor asphalt, concrete, and gravel storage areas, all surrounded by a six foot chain link fence. The building, which was torn down in 2001, had a cinder block east-west partition wall with a

floor trench drain in the north room. The floor trench drain was sealed in 1988.

Barrels/Drums/Buckets/Cans **Waste Type:**

Waste **Description:** Since 1943, the building had been used to store various amounts of low-level radioactive wastes and mixed waste. Solids were stored outside, while liquids were contained inside the building. The mixed waste stored after January 1986 included: a. Neutralized solid waste for the unrecoverable uranium stream of the 300 Area Waste Acid Treatment System, b. Uranium contaminated metallic lead, c. Salt and sludge containers from beta and quench metal heat treatment furnaces, d. Uranium contaminated perchloroethylene, chloroform, and ethyl acetate, e. Beryllium/zircaloy-2 alloy chips and fines generated at the stepcut lathe, before and after concreting at the 304 Concretion Facility, f. Spent coolant from counterbore lathes in the 333 Building, g. Waste oil and hydraulic fluids that are known, or strongly suspected, to be contaminated with uranium, h. Salt crystals (copper fluorozirconate) from the bottom of the waste storage tanks in the 334-A Building, i. Acids (HNO3, HF, and H2SO4 mixtures) as a solution and sorbed on opal clay. There were no records of waste spills or leaks at the site. Note: Waste materials began being generated in 1943 with the construction and startup of this facility.

303-M SA **Site Code: Classification:** Accepted

Site Names: 303-M SA, 303-M Storage Area, 303-M **ReClassification:**

Building Storage Area

Site Type: Start Date: 1983 Storage 1987 **Site Status:** Inactive **End Date:**

The 303-M Storage Area is an inactive curbed (6 inch) concrete pad adjacent to the west side of Site **Description:**

the 303-M Uranium Oxide Facility. The concrete surface has been painted with a heavy grey paint. Several "fixed radioactive contamination" labels at visible on the surface. The chain link fence has been removed. A 6.7-foot (1.8 meter) wide concrete ramp provides access to the storage pad through the curb on the west side of the pad. The north and center doors in the west wall of the 303-M Building open onto to the storage area (see photo). There is a low point storm drain in the storage pad near the center door about 3 feet (0.9 meters) from the center of the west

side of the 303-M Building. The storm drain contains visible liquid and appears to be active. Current drawing indicate the storm drain (bottom elevation 386.40, top elevation 391.05) overflows (at elevation 389.55) to a 4-Inch Process Sewer line that joins a main Process Sewer line at a point about 6 feet ((1.8 meters) south of the southwest corner of the 303-M Uranium Oxide Facility. The storage area also adjoins an underground steam service vault located outside the curbed area on the north end of the current painted area which includes the storage pad. The steam service vault has a solid diamond pattern metal cover with a keyed latch. Drawings indicate the vault houses a 1.25-inch (3.1 cm) diameter steam supply line for the 303-M UOF.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

The area was used for storage of pyrophoric uranium and zirconium fines awaiting treatment in the 303-M Oxidation Facility. The metal turnings were stored under water in 30 gallon metal drums. The drums of uranium fines were stored in a spaced array defined by painted yellow circles on the pad. An estimated 127 tons (115,300 kilograms) of uranium were treated during the 303-M Facilities operation from 1983 to 1987.

Site Code: 303-M UOF Classification: Accepted

Site Names: 303-M UOF, 303-M Uranium Oxide **ReClassification:**

Facility

Site Type: Process Unit/Plant Start Date: 1983

Site Status: Inactive End Date:

Site Description:

The unit is a reinforced concrete structure containing a highbay area and a one story extension on the north side of the building. A concrete pad used for storing feed material is located on the west side of the building. With the exception of final roof maintenance, the end-point criteria work has been completed for transition of the facility to the ERC Surveillance and Maintenance program. Electrical services have been disconnected, the process sewer drains have been plugged, and the steam and water supplies have been turned off. The fence which enclosed the west side storage pad has been removed (see 303-M SA).

Waste Type: Chemicals

Waste The oxidation process feed material was pyrophoric uranium and zircalloy-2 fines.

Description: Approximately 127 tons (115,300 kilograms) of material was oxidized during operations. Waste

currently at the facility may include residual radiological and chemical contamination in the

process equipment, on surfaces, and in the process sewer.

Site Code: 304 CF Classification: Accepted

Site Names: 304 CF, 304 Concretion Facility ReClassification: Closed Out (11/30/1995)

Site Type:Process Unit/PlantStart Date:1952Site Status:InactiveEnd Date:1995

Site The 304 Concretion Facility was designed and constructed in 1952. The main building is metal and rests on a concrete pad. The ceiling has exposed steel trusses (girders). The north and south

and rests on a concrete pad. The ceiling has exposed steel trusses (girders). The north and south ends of the building have sliding doors, and there are windows in the east side. Regular doors are located on the north and west sides. The building has no interior insulation or wallboard. Drainage to the process sewer is provided by a trench along the eastern wall, a sump along the

western wall, a sink drain, and a floor drain.

A metal change room was added on the east side of the building in 1972. The sliding metal doors are located in the north and west walls and a window is located on the east side of the change room. The walls and ceiling of this change room are insulated and covered by wallboard.

There is a concrete pad on the north side of the building (WIDS Site 304 SA).

During the history of the Facility, several exhaust and vent systems were used. The original system was composed of three roof vents powered by 58 cubic meters (2,050 cubic feet) per minute electric fans. This system was used from 1952 to the mid-1960's. The electricity was disconnected to the fans in 1971.

When the building had furnaces for the melting of metals (1952 to the late 1950's), the furnace cooling air was exhausted through a 15.2 centimeter (6 inch) diameter exhaust pipe on the west side of the building. The exhaust pipe is still in place, but is sealed off in the sump (formerly a furnace pit).

The first fume exhaust system was a 53.8 cubic meters (1,900 cubic feet) per minute Roto-clone exhauster and was used to exhaust acid and nitrogen oxide fumes from the nickel plating operations (late 1950's to mid-1960's). No monitoring capabilities existed on this exhaust system.

The existing cyclone precipitator exhaust system replaced the plating operation exhaust system in 1971. Both exhausters were located on the concrete pad outside the east side of the building. The flow rate, manufacturer, and efficiency of the present cyclone exhaust system are unknown. The exhaust system was used to remove cement dust from the operator's work area when bags of cement were being emptied and the concrete mixer was in operation. After the air passed through the cyclone precipitator, it was discharged vertically approximately 3.66 meters (12 feet) above ground level. The discharge was sampled continuously for uranium particulates while the precipitator was in service.

In addition to the exhaust systems described previously, the building contained a 939 square meters (10,000 square feet) per minute evaporative (swamp) cooler. Until approximately 1985, the swamp cooler was used to cool the building. The swamp cooler was located on the concrete pad outside the southeast corner of the building. The swamp cooler was removed in 1992.

The Facility contains five drains that entered the process sewer. A floor drain near the cement mixer discharges to the sump where fines settled out. The sump has a removable screened standpipe, about 40.6 centimeters (16 inches) high, that overflowed into an underground drain line to the process sewer on the east side of the building. A water line discharged directly into the overflow pipe below the screen and was used when the concretion process was in operation. This flowing water (flow rate unknown) helped prevent the P-trap from plugging with concrete. Four other drains entered the main underground drain, including a drain from the east side floor trench, a drain from the sink in the southwest corner of the building, and overflow drain from the outside steam condensate quench sump on the east side of the building, and a drain from the swamp cooler on the exterior pad at the southeast corner of the building.

The main underground drain slopes from the bottom of the sump to the process sewer. The elevation of the bottom of the main drain, where the drain passes under the east wall of the Facility, is about 116.1 meters (381 feet). The elevation of the bottom of the process sewer is about 115.5 meters (379 feet), and elevation of the Facility floor is about 117.7 meters (386 feet)

Waste Type: Chemicals

Waste Description:

Radiological contamination (derived from building concretion and plating activities) on surfaces and in building piping may still be present. Hazardous wastes were addressed in the facilities

RCRA closure plan.

The waste sources are described below.

Beryllium/zircaloy-2 alloy and zircaloy-2 chips and fines that were stored temporarily at the 303-K Facility were concreted into containers to reduce their ignitability.

From 1985, spent counterbore lathe coolant (an aqueous synthetic lubricant) from lathes in the 333 Building was stored at the 303-K Facility until it could be used as makeup water in the 304 Facility cement mixer during concretion of chips and fines. The coolant was a nonregulated material. The spent counterbore lathe coolant used for makeup water for concretion in the 304 Facility was Polar chip 350L, which was diluted with water 20 to 1. Besides uranium, coppersilicon alloy, zircaloy-2 alloy, and graphite particulates, the only potential contaminant in the lathe coolant was AW Hydraulic Oil 32, used in the counterbore lathe.

Once a year during the recyclable uranium concretion operation (1971 to 1982), a 3-day sample of the overflow pipe in the sump was taken to calculate a loss factor to the sewer for uranium chips and fines. The highly variable flow rate was calculated by adding a known dilute concentration of lithium nitrate 0.34 kilograms per liter (0.2 pounds per gallon) at a known flow rate to the sump for a known sampling time. The change in lithium concentration and time would give the total volume of solution discharged from the sump. No routine sampling of the process sewer from the 304 Building occurred.

Until March 1975, all waste liquid chemicals in the fuels operation were discharged to the process sewer. Therefore, during the nickel-plating pilot plant operation (late 1950's to mid-1960's), waste chemicals from this operation in the 304 Facility would have entered the process sewer.

During concretion operations, the water that covered the uranium chips and fines, and 5 percent beryllium/zircaloy-2 chips in the incoming drums, were drained into the process sewer after passing through the sump to settle out entrained solids. The water covering the chips and fines would have contained an unknown amount of cutting fluid from the lathe operations. Four different cutting fluids were used.

In the summer of 1988, spent halogenated solvents consisting of perchloroethylene, 1,1,1-trichloroethane, and rinse water used in degreasing tanks in the fuels manufacturing process were stored at the 303-K Facility and then moved to the 304 Facility for repackaging. Occasionally, Ethyl acetate-bromine solutions generated from laboratory analysis work for uranium was mixed with degreaser solvents.

The maximum estimated inventory of containerized waste stored at the 304 Facility at any time was 40 containers. This total includes container sizes (not including overpacks) of 55, 30, and 7.5 gallons. Some of these containers contained labpacks, some were partially filled, and some were full. Up to 10 208 liter (55 gallon) containers could be concreted each day. An average of 9071.8 kilograms (20,000 pounds) of dangerous waste was concreted each year. The maximum amount stored inside was 2082 liters (550 gallons).

Site Code: 304 SA Classification: Accepted

Site Names: 304 SA, 304 Storage Area, 304 Building ReClassification: Closed Out (11/30/1995)

Storage Area

Site Type:StorageStart Date:1972Site Status:InactiveEnd Date:1986

Site The 304 Storage Area is a concrete pad surrounded by asphalt on two sides.

Description:

Barrels/Drums/Buckets/Cans Waste Type:

Waste **Description:** No wastes are currently stored at the site. The area was previously used to store containers of potentially contaminated waste generated in the fuel fabrication process. The site was RCRA clean closed in 1995. Radiological contamination may be present on pad surfaces and in the

surrounding soil.

305-B SF **Site Code: Classification:** Accepted

Site Names: 305-B SF, 305-B Storage Facility **ReClassification:**

Site Type: Start Date: 1978 Storage

Site Status: Active **End Date:**

The 305-B Building is a one story frame and steel building with a basement. It was constructed in Site 1952 and modified in 1954. In January 1978, a two story high-bay was added for waste storage. **Description:**

Waste Type: Chemicals

Waste **Description:** Chemical and radiological contamination may be present in and around the facility, due to the operation of the Physical Constants Test Reactor and the Thermal Test Reactor that operated in the building prior to 1978. In 1978 the building became a waste assembly area/satellite storage area for the 300 Area Research and Development facilities in the 300 Area. Hazardous and radioactive waste has been stored, repackaged and/or consolidated (mostly in 55 gallon drums) in the 305-B building high bay and basement. The designed storage capacity is 30,000 gallons.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The site is currently used to store hazardous and mixed waste.

Description:

Site Code: 307 RB Classification: Accepted

307 RB, 307 Retention Basins ReClassification: **Site Names:**

Site Type: Retention Basin **Start Date:** 1953

Site Status: Active **End Date:**

Description:

Site

The facility consists of four open, epoxy-coated, concrete basins. Each basin has a nominal 94,500 liter (25,000 gallon) capacity. The Retention Process Sewer (RPS) ties into the basins on the north side, passing through a sample pit northwest of retention basin #1. The 300 Area Process Sewer and the Radioactive Liquid Waste Sewer (RLWS) drain from the south side of the

basins

Waste Type: Process Effluent

Waste **Description:** The Retention Process Sewer line and the 307 Retention Basin systems (the 3707-F control shack, the RPS sample pit, 307 Trench and RLWS diversion control, and other ancillary equipment) were installed to collect "potentially" contaminated liquids from the sinks, drains and sumps of the laboratory facilities. During FY98, 12 million liters (3 million gallons) of liquid was received by the retention basins; none was diverted to the Radioactive Liquid Waste Sewer (RLWS). Liquid effluents that meet process sewer discharge criteria are released to the

process sewer. Waste that exceeds discharge limits is held until it can be transported to the 200 Area double-shell tanks. Prior to October 1,1998, waste above discharge limits was diverted to the 340 facility holding tanks.

Site Code: 309-TW-1 Classification: Accepted

Site Names: 309-TW-1, 309-TW Tank #1, 309 Holdup ReClassification:

Tanks

Site Type:Storage TankStart Date:1960Site Status:InactiveEnd Date:1973

Tank 309-TW-1 is the northernmost tank in the 309 Holdup Tank System. All three tanks are located in a rectangular, underground concrete vault. A chain-link fence surrounds the site. Pumps, vents, piping, a valve box and the top of the concrete vault are visible above grade.

The tanks are empty and the line to the sewer is capped. Residual contamination is present in the

tanks and piping.

Waste Type: Process Effluent

Waste The unit received aqueous nonhazardous radioactive wastes from the operation of the Plutonium

Description: Recycle Test Reactor. Residual contamination may be present in the empty tanks.

Site Code: 309-TW-2 Classification: Accepted

Site Names: 309-TW-2, 309-TW Tank #2, 309 Holdup ReClassification:

Tanks

Site Type:Storage TankStart Date:1960Site Status:InactiveEnd Date:1973

Site Tank 309-TW-2 is the center tank in the 309 Holdup Tank System. All three tanks are located in a rectangular, underground concrete vault. A chain-link fence surrounds the vault. Pumps, vents,

piping, a valve box and the top of the concrete vault are visible above grade.

The tanks are empty and the line to the sewer is capped. Residual contamination is present in the

tanks and piping.

Waste Type: Process Effluent

Waste The unit received aqueous nonhazardous radioactive wastes from the operation of the Plutonium

Description: Recycle Test Reactor. Residual contamination may be present in the tanks.

Site Code: 309-TW-3 Classification: Accepted

Site Names: 309-TW-3, 309-TW Tank #3, 309 Holdup ReClassification:

Tank

Site Type:Storage TankStart Date:1960Site Status:InactiveEnd Date:1973

Site **Description:** Tank 309-TW-3 is the southernmost tank in the 309 Holdup Tank System. All three tanks rest in a rectangular, underground concrete vault. A chain-link fence surrounds the vaults. Pipes and

risers are visible above grade.

The tanks are empty and the line to the sewer is capped. Residual contamination is present in the

tanks and piping.

Waste Type: Process Effluent

The unit received aqueous nonhazardous radioactive wastes from the operation of the Plutonium Waste

Description: Recycle Test Reactor. Residual contamination may be present in the tank.

Site Code: 309-WS-1 **Classification:** Accepted

Site Names: 309-WS-1, 309 Plutonium Recycle Test **ReClassification:**

> Reactor Ion Exchanger Vault, Reactor Ion Exchange Pit, PRTR Ion Exchange Vault

Process Unit/Plant **Start Date:** 1961 **Site Type:** Inactive **End Date:** 1969 **Site Status:**

The 309-WS-1 Vault is a below grade, reinforced concrete structure containing two levels. The vault has connecting piping to the dome. The upper (main vault) level housed the ion exchangers **Description:**

(IX) used for moderator cleaning, while the lower (resin disposal) level was used to store spent columns. The lower vault has been cleaned of debris, decontaminated and coated with a fixative paint. The upper vault was cleaned of debris and swept clean. Access to the upper vault is through shielding blocks and access to the lower vault is through two concrete plugs.

Waste Type: Chemicals

Waste Following deactivation activities, residual radiological contamination and chemical contamination from the ion exchange resin may be present on surfaces in the vault. **Description:**

Contaminants of concern are cesium-137 and strontium-90. The rainwater (in the lower vault)

and ion exchange columns were removed in 1995.

Site Code: 309-WS-2 **Classification:** Accepted

Site Names: 309-WS-2, Rupture Loop Ion Exchange **ReClassification:**

Pit, Ion Exchange Vault, Rupture Loop Annex Ion Exchange Loop Vault, RLAIX,

PRTR Rupture Loop

Site Type: Process Unit/Plant **Start Date:** 1960 **End Date:** 1969

Site Status: Inactive

The 309-WS-2 Ion Exchange Vault (RLAIX) is an underground, reinforced concrete structure. Site **Description:**

The unit is divided into five stalls. Four stalls held horizontally configured ion exchange columns, while the fifth stall is covered by a steel plate. A drain in the fifth bay discharged to a sump in Room 20 of the 309 Building. A rain cover has been installed over the top of the vault to prevent

water from entering the vault.

Waste Type: Equipment Waste Description:

Stabilized radiological contamination is present on vault surfaces. Contaminants of concern are transuranics, cesium-137 and cobalt-60. Prior to stabilization, survey reports indicate radiological contamination levels were as high as 70,000 disintegrations per minute per square centimeter beta-gamma and 28,000 disintegrations per minute per square centimeter alpha and with contact dose rates up to 2.5 rem per hour. After cleanout and stabilization, contamination levels were less than 1,000 disintegrations per minute per square centimeter beta-gamma, less

than background (3 counts per minute) alpha, and a dose rate of less than 0.5 millirem per hour.

Site Code: 309-WS-3 Classification: Accepted

Site Names: 309-WS-3, 309 Brine Tank ReClassification:

Site Type:Storage TankStart Date:1960Site Status:InactiveEnd Date:1969

Site The unit has been backfilled, and grass has been planted above the tank. The Brine Tank is a **Description:** below grade, rectangular concrete structure with two chambers. Access/loading ports were

installed on the top of the tank. Inside the tank, four perforated transite pipes ran the length of the main chamber. The pipes were suspended in a gravel filter bed and covered by a layer of sand.

The second chamber acted as a holding tank.

Waste Type: Chemicals

Waste The unit stored brine salt to be used by the process water/brine tanks within the basement of the

Description: 309 Building.

Site Code: 311 MT1 Classification: Accepted

Site Names: 311 MT1, 311 Methanol Tank 1, 311 Tank ReClassification: Closed Out (2/12/1999)

Farm Underground Methanol Tank #1, 311-

1

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site The former site has been backfilled and is covered with gravel. Prior to removal, the site

Description: consisted of a horizontal, flat-ended cylindrical tank.

Waste Type: Chemicals

Waste The unit contained an aqueous solution of methanol. Methanol was used as a drying agent for the aluminum cleaning process. The methanol was pumped from the tank in 1971. The tank

was removed in 1989.

Site Code: 311 MT2 Classification: Accepted

Site Names: 311 MT2, 311 Methanol Tank 2, 311 Tank ReClassification: Closed Out (2/12/1999)

Farm Underground Methanol Tank #2, 311-

2

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site The former site has been backfilled and is covered with gravel. Prior to removal, the site

Description: consisted of a horizontal, flat-ended cylindrical tank.

Waste Type: Chemicals

Waste The unit contained an aqueous solution of methanol. Methanol was used as a drying agent for

Description: the aluminum cleaning process. The methanol was removed from the tank in 1971. The tank

was removed in 1989.

Site Code: 311-TK-40 Classification: Accepted

Site Names: 311-TK-40, 311 Neutralized Waste Tank 1 ReClassification: Closed Out (12/6/2001)

Site Type: Storage Tank Start Date: 1953

Site Status: Inactive End Date:

Site This site has been clean closed as part of the 300 Area Waste Acid Treatment System (WATS)

Description: Partial Closure in December 2001.

The 311-TK-40 tank is an isolated, stainless steel cylinder in the horizontal position. The tank is

positioned within a concrete containment structure.

Waste Type: Chemicals

Waste The tank is empty and isolated. From 1953 to 1973 the tank held nitric acid. Since 1973 the

Description: system has been part of the 300 Area Waste Acid Treatment System. It held liquid mixed waste

prior to disposal.

Site Code: 311-TK-50 Classification: Accepted

Site Names: 311-TK-50, 311 Neutralized Waste Tank 2, ReClassification: Closed Out (12/6/2001)

311 Neutralization Tank #2

Site Type: Storage Tank Start Date: 1985

Site Status: Inactive End Date:

Site Site 311-TK-50, an 18,927 liter (5000 gallon) vertical stainless tank has been drained,

Description: characterized, isolated, and clean closed.

Waste Type: Chemicals

Waste The unit received waste solutions consisting of neutralized liquid from the nonrecoverable

Description: uranium stream and filtrate from processing of the uranium-bearing waste stream. The tank was

used to decant liquid waste.

Site Code: 313 CENTRIFUGE Classification: Accepted

Site Names: 313 CENTRIFUGE, 313 Centrifuge, 300 ReClassification: Closed Out (12/6/2001)

Area WATS

Site Type:Process Unit/PlantStart Date:1985Site Status:InactiveEnd Date:1997

Site This site has been clean closed under the 300 Area Waste Acid Treatment System (WATS)

Description: Partial Closure. The centrifuge was removed in 1997 and disposed of as low level solid waste.

Waste Type: Chemicals

Waste The centrifuge treated neutralized nonrecoverable uranium bearing waste slurry by separating

Description: the solid and liquid phases.

Site Code: 313 CRO Classification: Rejected (2/12/1999)

Site Names: 313 CRO, 313 Copper Remelt Operations, ReClassification:

313 Building Copper Remelt Operations

Site Type:Process Unit/PlantStart Date:1973Site Status:InactiveEnd Date:1988

Site The 313 Copper Remelting Operation was performed in the southern end of the 313 Building.

Description: The 313 Building is a large structure resting on a reinforced concrete slab floor. The walls are

concrete block and structural steel framing. The roof is a precast concrete slab covered in tar and

gravel. Interior walls are concrete block or concrete brick.

Waste Type: Chemicals

Waste Copper-silicon alloy scrap materials from the fuel fabrication process were melted, cast, and

Description: machined in preparation for recycling. The unit processed 600 pounds (270 kilograms) per day

when in operation.

Site Code: 313 ESSP Classification: Accepted

Site Names: 313 ESSP, 313 East Side Storage Pad, 313 ReClassification:

Building East Site Storage Pad

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site Status: Inactive End Date:

Site The 313 East Side Storage Pad is a large concrete pad with an asphalt ramp that connects the pad to Ginko street. No wastes of any kind are currently stored at the site. The Waste Acid Treatment

System pipe trench (WIDS Site 300-224) passes east-west through the site and is posted as internally contaminated with radioactive material. Two areas of the pad, located adjacent to the east wall near the southern end of the 313 building have been painted gray. Signed are placed at the base of the walls, just above the painted areas that read "Fixed Contamination - Contamination

Under Grey Paint on Ground".

Waste Type: Barrels/Drums/Buckets/Cans

Waste The area was used to stage mixed waste including byproduct waste materials from the fuels fabrication process and neutralized solids from the 313 Recovery Operations process.

Site Code: 313 FP Classification: Accepted

Site Names: 313 FP, 313 Filter Press, 300 Area Waste ReClassification: Closed Out (12/6/2001)

Acid Treatment System

Site Type:Process Unit/PlantStart Date:1944Site Status:InactiveEnd Date:1997

Site This site has been clean closed under the 300 Area Waste Acid Treatment System Partial Closure

Description: in 2001. The 313 Filter Press was removed in 1997 and buried as low level solid waste.

Waste Type: Chemicals

Waste The unit treated recoverable and nonrecoverable uranium-bearing waste acid by separating solid

Description: and liquid phases. Residual radiological and chemical contamination may be present.

Site Code: 313 MT Classification: Accepted

Site Names: 313 MT, 313 Methanol Tank, 313 Building ReClassification: Closed Out (2/12/1999)

Underground Methanol Storage Tank

Site Type:Storage TankStart Date:1955Site Status:InactiveEnd Date:1971

Site The 313 Methanol Tank was removed in 1989. The excavation was backfilled and the floor was

Description: patched with concrete. Prior to removal the site consisted of a steel cylindrical tank lying

horizontally. The tank was below the floor of the 313 Building.

Waste Type: Chemicals

Waste From 1971 to 1987 the tank contained an aqueous methanol solution. The tank was removed in

Description: 1989. The tank never received an emergency methanol dump.

Site Code: 313 URO Classification: Accepted

Site Names: 313 URO, 313 Uranium Recovery ReClassification: Closed Out (2/12/1999)

Operations, Uranium Recovery Operations

Site Type: Process Unit/Plant Start Date: 1954
Site Status: Inactive End Date: 1997

Site In 1997, the 313 Uranium Recovery Operation process equipment and piping were removed and

Description: the concrete surfaces scabbled and decontaminated. Past practice sub-floor contamination

remains to be addressed as well as the potential for some minor RCRA contributions to subfloor

contamination.

Waste Type: Equipment

Waste The equipment contained uranium-bearing acid wastes from fuel fabrication processes that were used to treat and recover uranium. All contaminated equipment was removed from the facility.

Site Code: 313-TK-2 Classification: Accepted

Site Names: 313-TK-2, 313 Waste Acid Neutralization ReClassification: Closed Out (12/6/2001)

Tank, 300 Area Waste Acid Treatment

System

Site Type: Neutralization Tank Start Date: 1975

Site Status: Inactive End Date: 1997

Site This site has been clean closed under the 300 Area WATS partial closure in 2001. The 313-TK-2

Description: Neutralization Tank was removed in 1997. The tank was part of the 300 Area Waste Acid

Treatment System. The vertical, stainless steel, cylindrical tank was located within a bermed area

with other uranium recovery and acid treatment equipment.

Waste Type: Chemicals

Waste The unit treated uranium-bearing acid waste by neutralization. Prior to removal of the tank, a

Description: precipitate cake was present in the bottom of the tank.

Site Code: 315 RSDF Classification: Accepted

Site Names: 315 RSDF, 315 Retired Sanitary Drain Field ReClassification: Rejected (1/27/1999)

Site Type:Drain/Tile FieldStart Date:1950Site Status:InactiveEnd Date:1978

Site The 315 RSDF is an abandoned septic tank and drain field. The location shown by maps and

Description: drawings is not marked in the field. The site is covered with a surface of gravel and cobbles and

no vegetation. There are manhole covers with protective posts located in close proximity to the

abandoned septic tank/drain field.

Waste Type: Sanitary Sewage

Waste Description:

The unit received unknown amounts of sanitary wastes from the 315 Water Filter Plant.

The authors of the 300-FF-2 Operable Unit Technical Baseline Report speculated that water treatment chemicals may have been discharged to the site, but no supporting documentation for this has been found. According to Jim Day, Dyncorp Water Utilities and Support Services, the

only chemicals used at the facility were alum (nonhazardous) and chlorine gas.

Site Code: 316-3 Classification: Accepted

Site Names: 316-3, 307 Disposal Trenches, Process **ReClassification:**

Water Trenches

Site Type:TrenchStart Date:1953Site Status:InactiveEnd Date:1963

Site The trenches were backfilled in 1965 and are no longer visible. A large portion of the location **Description:** has been paved and fenced. The site consisted of two trenches, each 180 meters (600 feet) long,

9.1 meters (30 feet) wide at the east end, tapering to 3.0 meters (10 feet) wide at the west end. The depth varied from 3.7 meters (12 feet) to 8.2 meters (27 feet). The trenches ran in an east and west direction, approximately 6.1 meters (20 feet) apart. Each contained a 13 centimeter (5 inch)

vitrified clay pipe that ran the entire length of the unit.

Waste Type: Process Effluent

Waste The site received wastes from the 300 Area Laboratory expansion facilities (329 Biophysics Description: Laboratory, 327 Radiometallurgy Building, 324 Radiochemistry Building, 326 Pile Technology

Building, and 329 Mechanical Development Building). The wastes first went through the 307 Retention Basin. Retention Basin waste below discharge limits was released to the trenches

from 1953 to 1963. The trenches were excavated in 1963, and the contaminated soil was taken to 300 North (618-10) Burial Ground. The trenches were backfilled with process pond scrapings and fly ash in 1965.

In 1987 the west end of the 316-3 (near the 3727 building) was used to test a grout liquid waste solidification process. A 6.1 meter by 6.1 meter by 3.0 meter (20 foot by 20 foot by 9 foot) deep section of the trenches was excavated, and contaminated material (probably backfill from the south process pond) was encountered. Activities measured were as high as 378 picocuries per gram beta and 234 picocuries per gram alpha.

Site Code: 316-4 Classification: Accepted

Site Names: 316-4, 321 Cribs, 300 North Cribs, 316-N- ReClassification:

1, 616-4

Site Type:CribStart Date:1948Site Status:InactiveEnd Date:1956

Site The crib con Description: strata. A wa

The crib consists of two bottomless tanks, buried 3 meters (10 feet) below grade, resting on gravel strata. A waste influent line to the tanks starts 0.6 meters (2 feet) above the bottom of one of the tanks and extends at an angle above the tank top to grade level. A vent riser extends from the top of the same tank to 2.4 meters (8 feet) above grade. The tanks are 0.6 meters (2 feet) apart, with a stainless steel overflow pipe connecting them just below the top of each tank. The area is marked with AC-540 markers marked "Crib 316-4".

A 1995 Geophysical Investigation survey concurs the tanks have concrete footings and sit on a bed of gravel. It also states they are believed to be 8 ft in diameter, 7 ft tall, and approximately 10 ft below the surface.

Waste Type: Process Effluent

Waste Description:

The site received hexone-bearing uranium wastes and limited amounts of other uranium-bearing wastes from the 321 Building. Calculations up to and including July 1955 indicated liquid wastes containing a total of 550 kilograms (1,230 pounds) of uranium had been discharged to this site. Additional documentation has been found indicating 12,040 liters (3,182 gallons) of liquid organic waste was being shipped to the 300 North Cribs in 1962.

Site Code: 323 TANK 1 Classification: Accepted

Site Names: 323 Tank 1, 321 Building Underground ReClassification:

Waste Tanks, 321 Tank Farm #3

Site Type: Storage Tank Start Date: 1944

Site Status: Inactive End Date:

Site Description:

The 323 Tank 1 is not visible or accessible. It is encased in concrete with a minimum of 1-foot thickness to an outside surface. The tank (waste site) is a carbon steel horizontal tank on the west side of three other (identical) tanks encased in a large block of concrete. The top of the concrete block was used as the floor for the installation of the 323 Building (lower level) in 1958. The embedded tank originally had two 4-inch diameter and one 20-inch diameter pipe nozzle connections from the top of the tank through the concrete surface. None of these pipe nozzles are presently visible. 323 Tank 1 is the westernmost tank of the four tanks in the concrete encasement beneath the 323 Building. The 323 Building is posted "Authorized Personnel Only."

The roll-up door on the east side of the building is posted "Radioactive Material Area, Entry

Hanford Site Waste Management Units Report January 2004

Requirements: Radiological Worker 1 Training (If Unescorted)" and "Caution, Overhead Areas Are Not Routinely Surveyed. Contact Radiological Control Prior To Entry. The 323 Building lower level is crowded with mechanical and thermal test equipment. Process cooling water drain trenches in the concrete floor drain to a sump which discharges to the area process sewer.

Waste Type: Process Effluent

Waste Description:

The tank received neutralized uranium-contaminated water and/or basic aluminum cladding waste solutions from reprocessing research and development activities in the 321 Building and the 3706 Building (via the hot sink drains in the 321 Building laboratories), including those related to bismuth phosphate chemical separations, REDOX, Uranium Metal Recovery, PUREX, RECUPLEX, the Thorex program, and medical isotope extraction. The tank was emptied in 1952 or 1953.

Site Code: 323 TANK 2 Classification: Accepted

Site Names: 323 Tank 2, 321 Building Underground **ReClassification:**

Waste Tanks, 321 Tank Farm #3

Site Type: Storage Tank Start Date: 1944

Site Status: Inactive End Date:

Site Description:

The 323 Tank 2 is not visible or accessible. It is encased in concrete with a minimum of 1-foot thickness to an outside surface. The tank (waste site) is a carbon steel horizontal tank, one of four identical tanks encased in a large block of concrete. The top of the concrete block was used as the floor for the installation of the 323 Building (lower level) in 1958. The embedded tank originally had two 4-inch diameter and one 20-inch diameter pipe nozzle connections from the top of the tank through the concrete surface. None of these pipe nozzles are presently visible. 323 Tank 2 is the second tank from the west side of the concrete encasement beneath the 323 Building. The 323 Building is posted "Authorized Personnel Only." The roll-up door on the east side of the building is posted "Radioactive Material Area, Entry Requirements: Radiological Worker 1 Training (If Unescorted)" and "Caution, Overhead Areas Are Not Routinely Surveyed. Contact Radiological Control Prior To Entry. The 323 Building lower level is crowded with mechanical and thermal test equipment. Process cooling water drain trenches in the concrete floor drain to a sump which discharges to the area process sewer.

Waste Type: Process Effluent

Waste Description:

The tank received neutralized uranium-contaminated water and/or basic aluminum cladding waste solutions from reprocessing research and development activities in the 321 Building and the 3706 Building (via the hot sink drains in the 321 Building laboratories), including those related to bismuth phosphate chemical separations, REDOX, Uranium Metal Recovery, PUREX, RECUPLEX, the Thorex program, and medical isotope extraction. The tank was emptied in 1952 or 1953.

1932 01 1933.

Site Code: 323 TANK 3 Classification: Accepted

Site Names: 323 Tank 3, 321 Building Underground ReClassification:

Waste Tanks, 321 Tank Farm #3

Site Type: Storage Tank Start Date: 1944

Site Status: Inactive End Date:

Site Description:

The 323 Tank 3 is not visible or accessible. It is encased in concrete with a minimum of 1-foot thickness to an outside surface. The tank (waste site) is a carbon steel horizontal tank, one of four identical tanks encased in a large block of concrete. The top of the concrete block was used as the floor for the installation of the 323 Building (lower level) in 1958. The embedded tank originally had two 4-inch diameter and one 20-inch diameter pipe nozzle connections from the top of the tank through the concrete surface. None of these pipe nozzles are presently visible. 323 Tank 3 is the third tank from the west side of the concrete encasement beneath the 323 Building. The 323 Building is posted "Authorized Personnel Only." The roll-up door on the east side of the building is posted "Radioactive Material Area, Entry Requirements: Radiological Worker 1 Training (If Unescorted)" and "Caution, Overhead Areas Are Not Routinely Surveyed. Contact Radiological Control Prior To Entry. The 323 Building lower level is crowded with mechanical and thermal test equipment. Process cooling water drain trenches in the concrete floor drain to a sump which discharges to the area process sewer.

Waste Type: Process Effluent

Waste Description:

The tank received neutralized uranium-contaminated water and/or basic aluminum cladding waste solutions from reprocessing research and development activities in the 321 Building and the 3706 Building (via the hot sink drains in the 321 Building laboratories), including those related to bismuth phosphate chemical separations, REDOX, Uranium Metal Recovery, PUREX, RECUPLEX, the Thorex program, and medical isotope extraction. The tank was emptied in 1952 or 1953.

Site Code: 323 TANK 4 Classification: Accepted

Site Names: 323 Tank 4, 321 Building Underground **ReClassification:**

Waste Tanks, 321 Tank Farm #3

Site Type:Storage TankStart Date:1944Site Status:InactiveEnd Date:1987

Description:

Site

The 323 Tank 4 is a horizontal, cylindrical, underground carbon steel tank. The tank has rounded ends. The concrete enclosure around the tank includes a drain trench below the length of the tank which empties into a concrete sump at the south end. The sump was used for tank leak detection. The tank is the easternmost tank in a series of four tanks that lie in a concrete enclosure beneath the 323 (321-A) Building. Pearson (1987) issued an inspection report which included a photo of the open access to the tank through the modified center manhole. The 323 Building is posted "Authorized Personnel Only." The roll-up door on the east side of the building is posted "Radioactive Material Area, Entry Requirements: Radiological Worker 1 Training (If Unescorted)" and "Caution, Overhead Areas Are Not Routinely Surveyed. Contact Radiological Control Prior To Entry."

Waste Type: Process Effluent

Waste Description:

Between 1945 and 1953, the tank received neutralized uranium-contaminated water and/or basic aluminum cladding waste solutions from reprocessing research and development activities in the 321 Building and the 3706 Building (via the hot sink drains in the 321 Building laboratories), including those related to bismuth phosphate chemical separations, REDOX, Uranium Metal Recovery, PUREX, RECUPLEX, the Thorex program, and medical isotope extraction. The tank was emptied in 1952 or 1953. Between 1968 and 1987, the tank received waste from the 323 Building, including the hot cell drain, the cleanup box drain and overflow from the process water sump. The tank has not received waste since 1987. In 1987, the tank contained liquid and sludge. Significant uranium and aluminum was detected, but no thorium was detected in either the liquid or the sludge. The uranium and aluminum contamination would have entered the tank prior to 1967.

Site Code: 325 WTF **Classification:** Accepted

325 WTF, 325 Waste Treatment Facility, **Site Names: ReClassification:**

325 Hazardous Waste Treatment Units

Process Unit/Plant **Start Date:** 1953 **Site Type:**

Site Status: Active **End Date:**

Site The 325 Waste Treatment Facilities (WTF) consist of two sections. The first section, the shielded **Description:** analytical laboratory, is located in Rooms 32, 200, 201, 201A, 202, and 203. The second section

> includes the hazardous waste treatment units, located in Rooms 520, 527A, and 528. All facilities are part of the 325 Building. The building is constructed of welded steel framework covered with fluted steel insulated panels. The first and second floors are steel deck, topped with concrete and

vinyl. The roof is steel deck topped with tar and gravel.

Chemicals Waste Type:

The waste treatment facilities treated radioactive mixed wastes generated in research and Waste **Description:**

development activities. The 325 Waste Treatment Facility also served to test and evaluate the

effectiveness of various waste treatment technologies.

Site Code: 331 LSLDF **Classification:** Accepted

331 LSLDF, 331 LSL Drain Field, 331 Life ReClassification: **Site Names:**

Sciences Laboratory Drainfield

Drain/Tile Field **Start Date:** 1970 Site Type: **End Date:** 1974 **Site Status:** Inactive

Site The drainfield is marked with a single sign at the site center and surrounded with Underground

Description: Radioactive Material signs. The 331 Life Sciences Laboratory Drain Field (LSLDF) unit consists

of an abandoned drain field. The unit is fed by one diversion box and four septic tanks. The

waste line has been capped west of the septic tanks.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater from the 331-A and 331-B Buildings for discharge into

Description: the soil column.

Animal Waste Waste Type:

Waste The unit may have received animal waste from the 331 Buildings prior to construction of the 331-D Treatment Facility. Since most of the animal studies involved the use of radio isotopes, **Description:**

animal waste was segregated on the bases of activity. Solid animal waste, exceeding 200 picocuries per gram specific activity, was transported to the 100-F Area trenches on a regular basis. All other solid animal waste (less than 200 picocuries per gram specific activity) was allowed to flush into the 331 waste system. However, specific cases of contamination have occurred at the 331 complex. In January 1975, between 25 and 2,500 microcuries of plutonium-238 from contaminated soil used in a botanical experiment was washed into the process sewer.

This material may have ended up in the 331 Life Science Laboratory Drainfield (LSLDF).

The constituents of concern listed below reflects those which could potentially still be present in

the subsurface at the 331 Building WIDS sites. During the course of identifying the

constituents of concern no evidence of any waste containing PCBs was discovered during a records review. A walkthrough of the facility did not reveal the presence of any PCB containing equipment with the exception of possible PCB laden light ballast. All transformers were of the dry design. Therefore, PCBs are not listed among the constituents of concern. These contaminants are americium-241, curium-244, neptunium-237, plutonium-238, plutonium-239, uranium-232, uranium-233, cadmium, chromium, lead, uranium (total).

Site Code: 331 LSLT1 Classification: Accepted

Site Names: 331 LSLT1, 331 LSL Trench 1, 331 Life ReClassification:

Sciences Laboratory Trench #1

Site Type:TrenchStart Date:1966Site Status:InactiveEnd Date:1969

Site The trench is currently marked with a single sign at the site centerline and surrounded with **Description:** Underground Radioactive Material signs. The 331 Life Sciences Laboratory Trench 1 (LSLT1)

is an abandoned leaching trench that has been backfilled. The site was a rectangular excavation.

The site includes connecting waste transfer lines.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater.

Description:

Waste Type: Animal Waste

Waste Description:

The unit received liquid animal waste from the animal waste pit. Since most of the animal studies involved the use of radio isotopes, animal waste was segregated on the bases of activity. Solid animal waste, exceeding 200 picocuries per gram specific activity, was transported to the 100-F Area trenches on a regular basis. All other solid animal waste (less than 200 picocuries per gram specific activity) was allowed to flush into the 331 waste system. However, specific cases of contamination have occurred at the 331 complex.

The constituents of concern reflect those contaminants which could potentially still be present in the subsurface at the 331 Building WIDS sites. These include americium-241, curium-244, neptunium-237, plutonium-238, plutonium-239, uranium-232, uranium-233, cadmium, chromium, lead, uranium (total). During a records review to identify the constituents of concern, no evidence of any waste containing PCBs was discovered. A walkthrough of the facility did not reveal the presence of any PCB containing equipment with the exception of possible PCB laden light ballasts. All transformers were of the dry design. Therefore, PCBs are not listed among the constituents of concern.

Site Code: 331 LSLT2 Classification: Accepted

Site Names: 331 LSLT2, 331 LSL Trench 2, 331 Life ReClassification:

Sciences Laboratory Trench #2

Site Type:TrenchStart Date:1966Site Status:InactiveEnd Date:1974

Site The trench is currently marked with a single sign at the site centerline and surrounded with

Description: Underground Radioactive Material signs. The 331 LSLT2 is an abandoned leaching trench that has been backfilled. The site was a rectangular excavation. The site includes connecting waste

transfer lines.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater. In 1974, the clean (non-radioactive) animal sewage was

Description: connected to the regular 300 Area Sanitary Sewer System.

Waste Type: Animal Waste

Waste Description:

The unit received liquid animal waste from the animal waste pit. Animal wastes were the most prominent wastes, in terms of volume, generated by the 331 complex. Originally, liquid animal wastes from the complex including washdowns from the "hog and dog runs" were disposed to a large, unlined pit, east of the 331-D Building. Sewers carrying animal waste from the 331 complex were also connected to this pit.

Since most of the animal studies involved the use of radio isotopes, animal waste was segregated on the bases of activity. Solid animal waste, exceeding 200 picocuries per gram specific activity, was transported to the 100-F Area trenches on a regular basis. All other solid animal waste (less than 200 picocuries per gram specific activity) was allowed to flush into the 331 waste system. However, specific cases of contamination have occurred at the 331 complex.

The constituents of concern reflect those contaminants which could potentially still be present in the subsurface at the 331 Building WIDS sites. These include americium-241, curium-244, neptunium-237, plutonium-238, plutonium-239, uranium-232, uranium-233, cadmium, chromium, lead, uranium (total). During a records review to identify the constituents of concern, no evidence of any waste containing PCBs was discovered. A walkthrough of the facility did not reveal the presence of any PCB containing equipment with the exception of possible PCB laden light ballasts. All transformers were of the dry design. Therefore, PCBs are not listed among the constituents of concern.

Site Code: 331-C HWSA Classification: Accepted

Site Names: 331-C HWSA, 331-C Hazardous Waste ReClassification: Rejected (9/2/1998)

Storage Area, 331-C Low Level

Radioactive Storage Area

Site Type:Storage Pad (<90 day)</th>Start Date:1972Site Status:InactiveEnd Date:1996

Site Description:

The former 331-C HWSA is now a steel building and fenced laydown yard that is currently in use as a refrigeration maintenance shop, material storage area, laydown yard and radioactive waste storage area. The 331-C building is divided into three sections. The southern portion of the 331-C building is currently empty. The mid section of the building is in use as a equipment and material storage area. The northern portion of the building is in use as a refrigeration maintenance shop. The maintenance shop contains a satellite accumulation area for the storage of used oil [less than 208 liters (55 gallons)]. On the east side of the building, a radioactive waste storage area was observed under the roofed area. In addition, several 208 liter (55 gallon) drums of propylene glycol was stored under the roofed area. The fenced laydown area contains equipment.

Waste Type: Animal Waste

Waste Description:

The site stored dog bones and tissues contaminated with strontium-90 and cesium-137 stored in 70% ethanol solution, nitric acid, formalin and regulated empty containers. Hardcopy waste disposal records, waste verification, waste inventory, packing slips, characterization summaries, offsite shipment, waste specification, land disposal notification and certification, waste manifest records are available for this site. (See hardcopy WIDS file). It appears that most of the waste

disposed of onsite went to 218-W-4C and 218-W-5 Burial Grounds in the 200 West Area.

Waste Type: Misc. Trash and Debris

Waste Description:

Site Code: 333 ESHTSSA Classification: Accepted

Site Names: 333 ESHTSSA, 333 East Side Heat Treat ReClassification: Rejected (2/12/1999)

Salt Storage Area

Site Type:StorageStart Date:1964Site Status:InactiveEnd Date:1987

Site The 333 ESHTSSA is an inactive storage area. The site included various locations inside the 333

Description: fence where heat-treat salts were stored. It is now an open paved area near the southeast corner of

the 333 Building. Several areas of the asphalt pavement have been painted over and posted fixed

radiological contamination (WIDS Site UPR-300-17).

Waste Type: Barrels/Drums/Buckets/Cans

Waste This area is no longer used for storing hazardous wastes. In the past, it stored containers of solidified waste heat-treat salts from the Fuels Fabrication Facility. The waste consisted of

sodium chloride, potassium chloride, sodium nitrate, and potassium nitrate. Approximately,

thirty to fifty 208-liter (55-gallon) drums accumulated each year.

The Site Was Consolidated With:

Site Code: 618-1

Site Names: 618-1, Solid Waste Burial Ground No. 1, 318-1

Reason: Within Boundary Of Larger Site

Site Code: 333 ESHWSA Classification: Accepted

Site Names: 333 ESHWSA, 333 East Side HWSA, 333 ReClassification:

Building East Side Hazardous Waste

Storage Area

Site Type: Storage Start Date: 1964

Site Status: Inactive End Date:

Site The 333 East Side Hazardous Waste Storage Area is part of the asphalt paved area near the

Description: northeast corner of the 333 Building, within the building fence line. No barrels of hazardous

waste are stored here anymore, only miscellaneous non-hazardous materials. Currently, several

large trash dumpsters are at this location.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The area contained small quantities of miscellaneous waste oils, cutting lubricants, chemicals,

Description: and solvents stored in containers. In previous years, the area was used for miscellaneous

radioactive and hazardous waste storage. Currently this area is used only to store miscellaneous

non-hazardous solid building waste.

Site Code: 333 LHWSA Classification: Accepted

Site Names: 333 LHWSA, 333 Laydown HWSA, 333 **ReClassification:** Rejected (2/12/1999)

Laydown Hazardous Waste Storage Area

Storage Pad (<90 day) **Start Date:** 1971 **Site Type:**

Site Status: End Date: Active

Site The 333 LHWSA is a concrete and asphalt pad on the east side of the 333 Building. The unit is **Description:** within the 333 Building fence, and a second locked fence surrounds the unit. The white conex

box in this unit is the location of the present 90-day waste storage area. Currently this conex box is empty. The yellow boxes on the opposite side of the area contain low level radioactive waste.

Waste Type: Barrels/Drums/Buckets/Cans

The area typically contains corrosive and toxic metal wastes. Waste

Description:

Waste Type: Misc. Trash and Debris

Waste The fixed contamination area, i.e., concrete and asphalt, that was the result of storing radioactive

Description: materials in the past will be addressed as part of 618-1 Burial Ground. The Burial Ground

underlies the 333 LHWSA.

The Site Was Consolidated With:

Site Code: 618-1

Site Names: 618-1, Solid Waste Burial Ground No. 1, 318-1

Reason: Within Boundary Of Larger Site

Site Code: Classification: 333 WSTF Accepted

333 WSTF, 333 West Side Tank Farm, 333 **ReClassification: Site Names:**

> West Side Waste Oil Tank, 333 West Side Uranium Bearing Acid Tanks, 333

WSWOT

Storage Tank **Start Date:** 1972 **Site Type:**

Site Status: Inactive **End Date:**

Site The site is an above grade tank farm containing three cylindrical tanks that stand upright within a **Description:**

concrete containment basin. The containment basin is attached to the outside wall of the 333

Building. One of the tanks is labeled "Non Contaminated Waste Oil - Flashpoint 455 degrees F." The two other tanks are labeled "Uranium bearing acid." The concrete containment basin is 6 meters (19.7 feet) by 4.2 meters (13.8 feet) with a depth of 0.4 meters (1.3 feet). Asphalt pavement surrounds the basin and the west side of the building. On this pavement there is a sign

posting fixed radioactive contamination.

Waste Type: Oil

Waste The Waste Oil Tank was used for storage of oil from the extrusion press sump. It was verified

Description: that the oil did not contain polychlorinated biphenyls and was not ignitable prior to removal. No

known releases have been reported.

Waste Type: Chemicals

Waste The Uranium Bearing Acid tanks stored spent acid containing uranium. The uranium was a

Description: recoverable asset for recycling.

Site Code: 333-TK-11 Classification: Accepted

Site Names: 333-TK-11, 333 West Side Storage Tank ReClassification: Closed Out (12/6/2001)

for Uranium Bearing Acid, 333 Chromium

Treatment Tank 2

Site Type:Storage TankStart Date:1961Site Status:InactiveEnd Date:1998

Site This site has been clean closed under the 300 Area Waste Acid Treatment System (WATS) partial

Description: closure. 333-TK-11 was removed in 1998. It was a square uncovered metal tank. The unit was

connected to the 300 Area Waste Treatment System by a polyvinyl chloride (PVC) drain line.

Waste Type: Chemicals

Waste The tank was used to store spent etch acids (nitric and sulfuric acid with uranium in solution).

Description: The unit was also used to treat metal-bearing waste acids by reducing chromium (VI) to

chromium (III).

Site Code: 333-TK-7 Classification: Accepted

Site Names: 333-TK-7, 333 West Side Storage Tank for ReClassification: Closed Out (12/6/2001)

Uranium Bearing Acid, 333 Chromium

Treatment Tank 1

Site Type:Storage TankStart Date:1961Site Status:InactiveEnd Date:1998

Site This site has been closed out. Tank 333-TK-7 was removed in 1998. Tank 333-TK-7 was a

Description: square, uncovered metal tank. The unit was connected to the 300 Area Waste Acid Treatment

System by a polyvinyl chloride drain line. The tank was last used in 1987.

Waste Type: Chemicals

Waste The tank was used to store spent etch acids (nitric and sulfuric acid with uranium in solution).

Description: The unit was later used to reduce chromium (VI) to chromium (III) in metal-bearing waste acids.

Site Code: 334 TFWAST Classification: Accepted

Site Names: 334 TFWAST, 334 Tank Farm Waste Acid ReClassification: Closed Out (12/6/2001)

Storage Tank, Tank 4

Site Type:Storage TankStart Date:1971Site Status:InactiveEnd Date:1988

Site This site has been clean closed. The tank was taken out of service in 1986 and removed in 1988.

Description: The tank was a 27,710 liter (6000 gallon) Koroseal-lined mild steel tank. It was a vertical

cylindrical tank installed on the upper level of the 334 Tank Farm structure, about 8 feet (2.4

meters) above ground level.

Waste Type: Chemicals

Waste The unit was intermittently used to store waste acids containing nonrecoverable uranium from

Description: the fuel fabrication process.

Site Code: 334-A-TK-B Classification: Accepted

Site Names: 334-A-TK-B, 334-A Waste Acid Storage ReClassification: Closed Out (12/6/2001)

Tank 1

Site Type:Storage TankStart Date:1975Site Status:InactiveEnd Date:1998

Site This site has been clean closed. The tank was removed in 1998. The horizontal 7570 liter (2000)

Description: gallon) tank was a high-density polyethylene tank resting on a steel saddle. The tank was one of

three tanks in a 3 meter (10 foot) deep concrete pit below the 334-A Building. A cover has been

installed over the pit and the cover sealed.

Waste Type: Chemicals

Waste The unit was removed in 1998. It received waste acids from the fuel fabrication process. The

Description: waste contained nonrecoverable uranium, hydrofluoric, nitric, sulfuric, and chromic acids, and

various metals.

Site Code: 334-A-TK-C Classification: Accepted

Site Names: 334-A-TK-C, 334-A Waste Acid Storage ReClassification: Closed Out (12/6/2001)

Tank 2

Site Type:Storage TankStart Date:1975Site Status:InactiveEnd Date:1998

Site This site has been clean closed. The tank was removed in 1998. The horizontal 7570 liter (2000)

Description: gallon) tank was a high-density polyethylene tank resting on a steel saddle. The tank was one of

three tanks in a 3 meter (10 foot) deep concrete pit below the 334-A Building. A cover has been

installed over the pit and the cover sealed.

Waste Type: Chemicals

Waste The unit was removed in 1998. It received waste acids from the fuel fabrication process. The

Description: waste contained nonrecoverable uranium, hydrofluoric, nitric, sulfuric, and chromic acids in

solution bearing metals in solution.

Site Code: 335 & 336 RSDF Classification: Accepted

Site Names: 335 & 336 RSDF, 335 & 336 Retired ReClassification: Rejected (2/12/1999)

Sanitary Drain Field

Site Type:Drain/Tile FieldStart Date:1973Site Status:InactiveEnd Date:1978

Site The 335 and 336 RSDF is a below grade waste site consisting of a septic tank and drainfield that have been abandoned in place. Only a riser from the septic tank is visible in the field. There is no

evidence of a drainfield. The riser is a concrete pipe with an inner diameter of 20.5 centimeters (8.1 inches) covered by a metal grate. The riser is surrounded by metal posts and its top is approximately 18 centimeters (7.1 inches) above grade. The riser is 5.4 meters (17.7 feet) west of the manhole shown on M-3904, sheet 14, that is currently connected to the sanitary sewer. The area around the riser is sandy with some gravel and cobbles. Immediately south of the septic tank is a chained off area that is surrounded by metal posts and plastic chain. Inside the fenced off area are pipes, tanks, old equipment, and concrete and asphalt debris. There are no signs labeling the site or the adjacent chained off area.

Waste Type: Sanitary Sewage

Waste **Description:** The unit received unknown amounts of sanitary wastes from the 335 and 336 Buildings.

340 CHWSA **Classification:** Site Code: Accepted

Site Names: 340 CHWSA, 340 Complex HWSA, 340 **ReClassification:** Rejected (1/15/1999)

Complex Hazardous Waste Storage Area

Storage Pad (<90 day) **Start Date: Site Type: Site Status:** Inactive **End Date:**

According to 340 Complex personnel, hazardous waste was staged for less-than-90-day storage at various locations throughout the 340 Complex yard. This includes a small concrete pad to the **Description:**

northeast of 340B, and the asphalt pad to the west of the 340 Building.

Waste Type: Barrels/Drums/Buckets/Cans

Waste This area is no longer used to stage hazardous waste.

Description:

Site Code: 340 COMPLEX **Classification:** Accepted

340 COMPLEX, 340 Radioactive Liquid **Site Names: ReClassification:**

Waste Handling Facility

Site Type: Storage Tank **Start Date:** 1953

Site Status: Active **End Date:**

Site

The 340 Complex is located on the east side of the 300 Area. The 340 Complex consists of buildings 340, 340-A, 340-B, 3707-F, and two office trailers. Other 340 complex systems **Description:** include the 307 Retention Basins, two tanks in an underground vault, six aboveground tanks in 340A, underground transfer pipes, load-out and decontamination equipment, and instrumentation. Prior to 1963, the 340 Complex also included the 316-3 trenches, which disposed of retention

process waste that met release criteria.

The 340 Building and Annex includes a control room, decontamination area, mechanical equipment room, change and rest rooms, truck load-out facilities, and an operator's office. The process water, vacuum, and compressed dry-air subsystems are contained within these structures.

The 340 Vault is directly east of the 340 building, and is a below-grade concrete basin, with large concrete cover-blocks. The Vault contains two 57,000-liter (15,000-gallon) tanks once used for primary RLWS storage.

The 340-A building lies east of the vault, and houses six 30,000-liter (8,000-gallon) above ground tanks for auxiliary RLWS storage. The tanks are vented through the Vault filter system.

304-B building is divided into east and west sections. The east section was used for RLWS loadouts by rail to the 200 Areas. The west section is used for radioactive solid waste storage and for housing the east side ventilation system.

3707-F building houses the retention process sewer sampling equipment and controls.

MO-741 is the health physics technicians' office and survey station.

MO-036 is a double-wide trailer that provides offices for engineering, radiation control, and operations personnel.

Waste Type: Process Effluent

Waste The 340 Complex receives liquid effluent from 300 Area laboratories via the 300 Area **Description:** Radioactive Liquid Waste Sewer and the Retention Process Sewer. The sewer effluent was

collected in the 340 underground vault tanks and the 307 Retention Basins. Waste may also include organic and inorganic laboratory chemicals, acids, bases, and decontamination solutions.

Waste Type: Soil

Waste Several spills and leaks over the operational history of the 340 Complex have contributed radionuclides (such as Cesium and Strontium) and chemical waste to the soil column.

Site Code: 350 HWSA Classification: Accepted

Site Names: 350 HWSA, 350 Building Hazardous ReClassification: Rejected (2/24/1999)

Waste Storage Area, 350-D Hazardous

Waste Staging Area

Site Type: Storage Pad (<90 day) Start Date: 1982

Site Status: Active End Date:

Site The 350 Hazardous Waste Staging Area is inside the 350-D Building and on an asphalt pad in

Description: front of the building.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Typically, the area stores corrosive chemicals, used oils and PCB-contaminated oils. Oil **Description:** containing PCBs from old ballasts is stored inside the 350-D building along with combustible

liquids.

Site Code: 3712 USSA Classification: Accepted

Site Names: 3712 USSA, 3712 Uranium Scrap Storage ReClassification:

Area, 3712 Building Uranium Scrap Storage Area, 3712 Fuels Warehouse

Site Type: Storage Start Date: 1961

Site Status: Active End Date:

Site The 3712 USSA is an active uranium metal storage unit. The building is a steel frame structure

Description: with metal siding and a metal roof. The unit has a concrete floor and foundation. There are

"Radiologically Controlled Area" signs posted along the east side of the 3712 Building, just east

of the railroad tracks. The "Radiologically Controlled Area" signs continue around the north side of the building. The building has four roll-up doors - one each on the north and south sides of the building and two on the west side. Signs next to the north roll-up door read "Caution, Fissile Materials," "Caution, Radiation Area And Contamination Area, Entry Requirements: Personnel Dosimeter (TLD), Radiological Work Permit (RWP)," and "No Uranium Enriched Above 1.25 Nor Any Other Fissile Material Allowed In This Facility." The posting by the east walk-in door is the same as the north roll-up door except the "Caution Radiation Area And Contamination Area" sign is replaced by a "Radiological Buffer Area" sign. The posting by the south roll-up door is similar to the north roll-up door, with some additions - "Stop! No Visitors, No Entry Without Management And ACES Approval" and "Contact HPT Prior To Entry 376-3311." There is no "Caution, Radiation Area And Contamination Area" posting by the south door. The "No Uranium Enriched Above 1.25" sign is appended by the phrase "Without Prior Approval Of Facility Supervisor." There are large concrete blocks outside the north roll-up door on the west side of 3712. The blocks are placed far enough away from the building to allow some access to this door. Posting by this door was not reviewed during the November 24, 1998, walkdown. A pair of metal pipes exit the east side of 3712 near the southeast corner and enter a square concrete structure (see photo). There is a process sewer manhole northeast of the northeast corner of the building. Drawing M-3904, sheet 2, revision 24, shows two underground process sewer lines running under the 3712 Building where they converge and continue towards the northeast.

Waste Type: Chemicals

Waste Description:

The unit is used to store uranium fuel elements, components for fuel fabrication, concrete billets of ignitable uranium chips and fines, and uranium scrap. Contamination resulting from the 1979 and 1985 fires may be present in or on building surfaces.

Site Code: 3713 PSHWSA Classification: Accepted

Site Names: 3713 PSHWSA, 3713 Paint Shop ReClassification: Rejected (1/27/1999)

Hazardous Waste Satellite Area

Site Type:Satellite Accumulation AreaStart Date:1984Site Status:InactiveEnd Date:1987

Site Description:

Until 1987, the site was a hazardous waste satellite accumulation area. Today, the site is a concrete pad surrounded by a fiberglass and wood fence. There is a drain in the center of the pad. Items stored in this area include nonhazardous materials, such as ladders, hoses, and pipe. Currently, the 3713 Building is being used as a carpenter's shop.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Hazardous wastes have not been accumulated at this facility since the paint shop was moved.

The green contained small quantities of miscellaneous waste solutions. The waste was derived.

Description: The area contained small quantities of miscellaneous waste solutions. The waste was derived

from paint shop operations.

Site Code: 3713 SSHWSA Classification: Accepted

Site Names: 3713 SSHWSA, 3713 Sign Shop ReClassification: Rejected (1/27/1999)

Hazardous Waste Satellite Area

Site Type:Satellite Accumulation AreaStart Date:1984Site Status:InactiveEnd Date:1987

Site Until 1987, the site was a hazardous waste satellite accumulation area. It is no longer in

Description: existence. No evidence of the satellite accumulation area is apparent.

Waste Type: Barrels/Drums/Buckets/Cans

Hazardous wastes are no longer staged at this facility. The area accumulated miscellaneous Waste

small quantities of nonsolvent waste solutions from sign shop operations. **Description:**

3718-F BS **Site Code: Classification:** Accepted

3718-F BS, 3718-F Burn Shed ReClassification: Closed Out (8/1/1998) **Site Names:**

1968 **Site Type:** Process Pit **Start Date: Site Status:** Inactive **End Date:** 1998

The site was a small structure designed to burn waste alkali metals. The structure has been Site **Description:**

removed and all that remains is the concrete pad which it shared with other sites related to the

3718-F Alkali Metal Treatment and Storage Facility.

The 3718-F Burn Shed was a 3.0-meter by 3.7-meter (10-foot by 12-foot) sheet metal enclosure with a 2.4 meter (8-foot) wide roll-up door. Small stirring ports and windows were placed on the north and west sides. To the east of the burn shed was a fume scrubber through which the gaseous emissions from the burning were processed. The burn shed and fume scrubber were connected by overhead ductwork. The burn shed and fume scrubber were built on a concrete pad. The pad was bermed on the north and south and sloped to the east. A channel on the east side routed any drainage to a floor drain which discharged to the process sewer.

Chemicals Waste Type:

Waste **Description:** Wastes treated at the unit included: sodium, lithium and sodium-potassium alloys. After burning, the remaining wastes would have consisted of alkali metal oxides and carbonates. Small quantities of reactive laboratory waste may also have been treated. All wastes have been

removed.

Site Code: 3718-F SF **Classification:** Accepted

Site Names: 3718-F SF, 3718-F Storage Facility, 3718-**ReClassification:** Closed Out (8/4/1998)

F Alkali Metal Treatment Facility

Site Type: Storage **Start Date:** 1968 1989 **Site Status:** Inactive **End Date:**

Site **Description:** The 3718-F Storage Facility consisted of a single-story building, an adjoining loading pad, and a concrete treatment pad. The storage building has been removed and all that remains is the concrete pad, which it shared with other sites related to the 3718-F Alkali Metal Treatment and Storage Facility.

The 3718-F Storage Facility was designed and constructed in 1968, and redesigned and modified in 1973. The building, which measured 6.1 meters by 14.6 meters (20 feet by 48 feet), was constructed on a concrete pad. The gabled ends, roof, and siding were corrugated steel. The building had electric lights, electric space heaters, and two window air conditioning units. The northern half of the building was used as a storage area and the southern half was used as a work area. A concrete loading pad measuring 3.7 meters by 6.1 meters (12 feet by 20 feet) was located at the south end of the building.

The 15-centimeter (6-inch) thick concrete treatment pad measuring 7.2 meters by 14.6 meters (25 feet by 48 feet) adjoined the east side of the building. A burn shed and fume scrubber (3718-F BS) and two treatment tanks (3718-F TT1 and 3718-F TT2) were located on the pad. The north and south ends of the pad are bermed and the pad slopes to the east. Along the east edge is a 7.6-centimeter (3-inch) wide by 7.6 centimeter (3-inch) deep trench. The trench was connected to a floor drain which discharged to the process sewer system. This design was intended to prevent runoff onto the surrounding soils.

Waste Type: Chemicals

Waste Description:

Hazardous wastes are no longer stored in this facility.

The wastes stored at the facility while in use consisted of sodium, lithium, and sodium alloys. Cleaning agents used within the treatment tanks and discharged to the concrete pad included water, methanol, isopropanol, and 2-butoxy ethanol (trade name Dowanol). Reaction products contained within the solutions included alkali oxides, alkali carbonates, and alkoxides (strong organic bases).

During cleanup, polychlorinated biphenyl (PCB) Aroclor 1254 contamination from an unknown source was identified in soil samples.

Site Code: 3718-F TT1 Classification: Accepted

Site Names: 3718-F TT1, 3718-F Treatment Tank 1 ReClassification: Closed Out (8/4/1998)

Site Type:Storage TankStart Date:1968Site Status:InactiveEnd Date:1998

Site Description:

The 3718-F Treatment Tank 1 (3718-F TT1) was a tank used to clean equipment contaminated with alkali metals by reacting the metals with alcohol. The tank has been removed and all that remains is the concrete pad which it shared with other sites related to the 3718-F Alkali Metal Treatment and Storage Facility.

3718-F TT1 was a long, narrow tank constructed of 0.3-centimeter (1/8-inch) stainless steel. The tank had a hinged solid cover and was supported by eight metal legs spaced in pairs at intervals along the its length.

Waste Type: Chemicals

Waste Description:

Hazardous wastes are no longer treated in the tank. Wastes treated at the tank included sodium, lithium, and sodium-potassium alloys. Cleaning agents used within the treatment tank included methanol, isopropanol, and 2-butoxy ethanol (trade name Dowanol). The reaction products were alkoxides (strong organic bases).

Site Code: 3718-F TT2 Classification: Accepted

Site Names: 3718-F TT2, 3718-F Treatment Tank 2 ReClassification: Closed Out (8/4/1998)

Site Type:Storage TankStart Date:1968Site Status:InactiveEnd Date:1998

Site The 3718-F Treatment Tank 2 (3718-F TT2) was a tank used to clean equipment contaminated with alkali metals by reacting the metals with water. The tank has been removed and all that

remains is the concrete pad which it shared with other sites related to the 3718-F Alkali Metal Treatment and Storage Facility.

3718-T TT2 was a 430-gallon (1,630-liter) tank constructed of 0.3-centimeter (1/8-inch) stainless steel. The tank was topped by a hinged screen cover.

Waste Type: Chemicals

Waste Hazardous wastes are no longer treated in the tank. Wastes treated at the tank included sodium, **Description:** lithium, and sodium-potassium alloys. Water was used as the cleaning agent and the reaction

products were alkali metal hydroxides.

Site Code: 3746-D SR Classification: Accepted

Site Names: 3746-D SR, 3746-D Silver Recovery, 3746- ReClassification: Rejected (1/27/1999)

D Silver Recovery Process

Site Type:Process Unit/PlantStart Date:1984Site Status:InactiveEnd Date:1996

Site The 3746-D Silver Recovery unit is a piece of equipment located in the 3746-D Building, a **Description:** Ouonset hut. The electrolytic portion of the silver recovery unit is present, however, the ion

exchange columns are not. The recovery unit is currently inactive. A large white basin drains into the sanitary sewer system and is the only drain in the building. This drain is not part of the

3746-D Silver Recovery equipment.

Waste Type: Chemicals

Waste Corrosive silver containing waste photochemicals used to be processed to reclaim silver. During

Description: 1993, 7,721 liters (2,040 gallons) of photochemical waste was processed to recover 209.2

kilograms (1,139.686 troy ounces) of silver.

Site Code: 400 FD1A Classification: Accepted

Site Names: 400 FD1A, 400 Area French Drain 1A, ReClassification: Rejected (12/15/1998)

4717 Reactor Service Building HVAC Condensate, Miscellaneous Stream #14,

Injection Well #1A

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The unit is a 1.5 meter (5 foot) long, 1.2 meter (4 foot) diameter concrete or vitrified clay pipe

Description: filled with gravel. It is in a vegetation-free, gravel covered field south of the 403 Building and

cannot be identified visually. The site is not located in a depression or a contaminated area.

Waste Type: Water

Description:

Waste Reports conflict about effluents received by the unit which may have received demineralizer

backwash; Heating, Ventilation, and Air Conditioning (HVAC) system condensate from the

4717 Facility Reactor Service Building; and/or water and detergents. The flow rate is less than

0.038 liters per minute (0.01 gallons per minute).

Site Code: 400 FD1B Classification: Accepted

Site Names: 400 FD1B, 400 Area French Drain 1B, ReClassification: Rejected (12/15/1998)

4703 Building (FFTF Control Building) HVAC Condensate, Miscellaneous Stream

#15, Injection Well #1B

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

The unit is a 1.5-meter (5-foot) long, 1.2-meter (4-foot) diameter concrete or polyvinyl chloride

Description: (PVC) pipe filled with gravel. It is in a vegetation free, gravel covered field and cannot be

identified visually. The site is not located in a depression or contaminated area.

Waste Type: Water

Waste Reports conflict about effluents discharged to this unit which may receive sump water; Heating, **Description:** Ventilation, and Air Conditioning (HVAC) condensate from the 4703 Building; and/or water

Ventilation, and Air Conditioning (HVAC) condensate from the 4703 Building; and/or water and detergent solutions. The flow rate as less is less than 0.038 liters per minute (0.01 gallons

per minute).

Site Code: 400 FD2 Classification: Accepted

Site Names: 400 FD2, 400 Area French Drain 2, 4621E ReClassification: Rejected (12/15/1998)

Building HVAC Condensate and Stormwater, Miscellaneous Stream #16,

Injection Well #02

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The unit is a 1.5-meter (5-foot) long, 1.2-meter (4-foot) diameter concrete or polyvinyl chloride

Description: (PVC) pipe filled with gravel. The above ground portion is a 0.9 meter (3 foot) long, 15.2

centimeter (6 inch) diameter rusted metal pipe capped with a metal plug and surrounded with landscaping rocks and shrubs. The site is not located in a depression or contaminated area.

Waste Type: Water

Waste Reports conflict about effluents discharged to this unit. It may have received stormwater; and

Description: Heating, Ventilation, and Air Conditioning (HVAC) system condensate from the 4621E

Auxiliary Equipment Building; and/or water and detergent solutions. The "Inventory of Miscellaneous Streams", Revision 3, lists the sources as stormwater and potable water. This document lists the flow rate as less than 0.038 liters per minute (0.01 gallons per minute).

Site Code: 400 FD3 Classification: Accepted

Site Names: 400 FD3, 400 Area French Drain 3, 408A ReClassification: Rejected (12/15/1998)

East Dump Heat Exchanger Stormwater, Miscellaneous Stream #17, Injection Well

#03

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The unit is a 1.5-meter (5-feet) long, 1.2-meter (4-foot) diameter concrete or vitrified clay pipe

Description: filled with gravel. The above ground portion is two rusty metal pipes. One is 0.61 meters (2 feet) long and 8.9 centimeters (3.5 inches) in diameter. The other is 0.91 meters (3 feet) long and 11.4

centimeters (4.5 inches) in diameter. Each pipe is capped with a metal plug. The unit is surrounded by four 1.2-meter (4-feet) high yellow metal posts and is in a gravel-covered,

vegetation-free field.

Waste Type: Stormwater Runoff

Waste The site receives stormwater from the 408-A Dump Heat Exchanger (DHX). The flow rate is

Description: less than 0.038 liters per minute (0.01 gallons per minute).

Site Code: 400 FD4 Classification: Accepted

Site Names: 400 FD4, 400 Area French Drain 4, 491E ReClassification: Rejected (12/15/1998)

Heat Transport Building Stormwater and HVAC Condensate, Miscellaneous Stream

#18

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The unit is a 1.5-meter (5-foot) long, 1.2-meter (4-foot) diameter concrete or vitrified clay pipe **Description:** filled with gravel. The above ground portion is a 0.91 meter (3 foot) long, 11.4-centimeter (4.5-

inch) diameter, rusted metal pipe protruding from the middle of a gravel-covered field. It is surrounded by four 1.2-meter (4-foot) tall yellow metal posts. Each of the posts has had a 20-centimeter (8-inch) diameter PVC (polyvinyl chloride) pipe measuring 2.0 meters (6 feet 8 inches) in length placed over it. The white PVC pipes have been marked with three horizontal,

yellow stripes.

Waste Type: Water

Waste Reports conflict about effluents discharged to this unit. It may receive dilute condensate; floor **Description:** drain effluent and effluent from the 491-E Heat Transport Building consisting of stormwater

from the roof of HTS-E, condensate from the building's Heating, Ventilation, and Air

Conditioning (HVAC) system, rheostat water, and non-regulated quantities of sodium carbonate. The "Inventory of Miscellaneous Streams", Revision 3, lists the streams as HVAC condensate and storm water. The flow rate is less then 0.038 liters per minute (less than 0.01

gallons) per minute.

Waste Type: Water

Waste

Description:

Site Code: 400 FD5 Classification: Accepted

Site Names: 400 FD5, 400 Area French Drain 5, 408 ReClassification: Rejected (12/15/1998)

South Building Stormwater and

Condensate, Miscellaneous Stream #19,

Injection Well #05

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site Description:

The unit is a 1.2-meter (4-foot) diameter 1.5-meter (5-foot) long concrete or polyvinyl chloride (PVC) pipe filled with gravel and located in a gravel and cobble covered field. The visible portion of the unit is two rusted metal stand pipes. On pipe is 38.1-centimeters (15 inches) tall by 11.4 centimeters (4.5 inches) in diameter and the other is 15.2 centimeters (6 inches) tall by 20.3 centimeters (8 inches) in diameter. Surrounding the unit are two 1.2-meter (4-foot) tall yellow metal posts. Both stand pipes have a metal cap.

Waste Type: Water

Waste Description:

Reports conflict about effluents discharged to the unit, which may receive stormwater; dump heat exchanger effluent; and rheostat water containing non regulated quantities of sodium carbonate from the 408-B Dump Heat Exchanger (DHX) and the 491-W Heat Transport Building; condensate from building air cooling systems, solutions of water and detergent. The "Inventory of Miscellaneous Streams", Revision 3 lists the streams as heat exchanger condensate and stormwater. This document states that this stream receives the heat exchanger condensate formerly routed to Miscellaneous Stream #20 (WIDS Site Code 400 FD6). The document lists the flow rate as less than 0.08 liters per minute (0.02 gallons per minute).

Site Code: 400 FD6 Classification: Accepted

Site Names: 400 FD6, 400 Area French Drain 6, 408C ReClassification: Rejected (12/15/1998)

West Dump Heat Exchanger Sump Stormwater, Miscellaneous Stream #20

Site Type:French DrainStart Date:1979Site Status:InactiveEnd Date:1995

Site The site was a 1.2-meter (4-foot) diameter, 1.5-meter (5-foot) long, concrete or vitrified clay pipe,

filled with gravel and cobble, and located in a gravel and cobble covered field. The above ground portion had three rusted metal pipes, one 0.9 meters (3 feet) tall, one 0.61 meters (2 feet) tall, and the third 0.3 meters (1 foot) tall. All three had metal caps. The unit was surrounded by four 1.2-

meter (4-foot) high yellow metal marker posts.

The location of the site is now under the Sodium Storage Facility (Building 402). The site was

abandoned in place. The site is not accessible.

Waste Type: Water

Description:

Waste Reports conflict about effluents discharged to this unit. It may have received stormwater from **Description:** the 408-C West Dump Heat Exchanger (DHX), condensate from building air cooling systems,

floor drain effluent, and/or other stormwater. The Inventory of Miscellaneous Streams, Revision

3 lists the flow as less than 0.038 liters (0.01 gallons) per minute.

Site Code: 400 FD7 Classification: Accepted

Site Names: 400 FD7, 400 Area French Drain 7, 4621W ReClassification: Rejected (12/15/1998)

Auxiliary Equipment Building HVAC Condensate and Stormwater, Miscellaneous Stream #21, 453C Switch Gear Pad Stormwater, Miscellaneous Stream #27,

Injection Well #07

Site Type: French Drain Start Date: 1979

End Date: Site Status: Active

The unit is a 1.5-meter (5-foot) long, 1.2-meter (4-foot) diameter concrete or polyvinyl chloride Site **Description:**

(PVC) pipe filled with gravel. Drawing H-4-14647 shows the site to be in the middle of a paved area northwest of the Fast Flux Test Facility (FFTF) Reactor Containment Building, south of some water tanks. The unit has a 15.2 centimeter (6 inch) diameter metal pipe with a metal cap at grade in its center. The french drain is not visible from the surface. It is paved over with asphalt. Drawing H-4-152050 show both the 453-C Building and 4621-W Building connected to it by

pipelines.

Waste Type: Water

Waste The site receives potable and stormwater from several sources. It receives stormwater from the 453-C Switch Gear Pad; effluent from the 4621W Auxiliary Equipment Building, that includes **Description:**

condensate from Heating, Ventilation, and Air Conditioning (HVAC) coolers, water from roof and floor drains and stormwater. The flow rate for the streams from the 4621W Building is less than 0.038 liters per minute (0.01 gallons per minute). The flow rate for the stormwater runoff from the 453C Switch Gear Pad is less than 0.038 liters per minute (0.01 gallons per minute).

400 FD8 Site Code: **Classification:** Accepted

Site Names: 400 FD8, 400 Area French Drain 8, 4621W **ReClassification:** Rejected (12/3/1998)

> Auxiliary Equipment Building HVAC Condensate, Miscellaneous Stream #22,

Injection Well #08

Site Type: French Drain **Start Date:** 1979

Site Status: Active **End Date:**

Site The unit is a 1.2-meter (4-foot) diameter, 1.5-meter (5-foot) long concrete or polyvinyl chloride

(PVC) pipe filled with gravel. Drawing H-4-14647 shows the site to be located in an asphalt **Description:**

covered area. The site is capped by a 20.3-centimeter (8-inch) diameter metal stand pipe with a

metal lid at grade.

Waste Type: Water

The site receives Heating, Ventilation, and Air Conditioning (HVAC) condensate from the Waste 4621W Auxiliary Equipment Building. The flow rate is less than 0.038 liters per minute (0.01 **Description:**

gallons per minute).

Site Code: 400 FD9 **Classification:** Accepted

400 FD9, 400 Area French Drain 9, 481 **ReClassification:** Rejected (12/3/1998) **Site Names:**

> Pumphouse Sanitary Water and Salt Water, Miscellaneous Stream #23, Injection Well

#09

Site Type: French Drain **Start Date:** 1979

Site Status: Active **End Date:**

The unit consists of a 1.5-meter (5-foot) long, 1.2-meter (4-foot) diameter concrete or vitrified Site

clay pipe filled with gravel. The above grade structure is a rusted metal stand pipe 12.7 **Description:**

> centimeters (5 inches) in diameter and 30.5 centimeters (1 foot) tall. It is located in a vegetation free, gravel covered field, and is surrounded by three 1.2-meter (4-foot) tall yellow steel posts

Waste Type: Water

Waste The site receives sanitary water from pump seal leaks, and salt water from water softener back flushing from the 481 Pumphouse. The flow rate is less than 0.038 liters per minute (0.01

gallons per minute)

Site Code: 400 FD10 Classification: Rejected (12/3/1998)

Site Names: 400 FD10, 400 Area French Drain 10, ReClassification:

482A Building - T-58 Stormwater, Miscellaneous Stream #25, Injection Well

#10

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The site is either a concrete or vitrified clay pipe filled with gravel (H-4-14647). The disposal structure is not visible in the field. The drawing (H-4-14647) states that the drywells shall be

located in the field so that they are 12.2 meters (40 feet) minimum from the nearest building line

and 3.05 meters (10 feet) minimum from utilities and other structures.

The pipe (cast iron soil) invert is to the top of the french drain. Connections (elbows) are made with 45 degree laterals. The top of the french drain is covered by a polyethylene sheet and a 5.1-

centimeter (2-inch) thick redwood or cedar wooden cover.

The feed pipe is a 10.2 centimeter (4 inch) diameter steel pipe (drain line) with metal grate cover that is flush with the surrounding concrete paved area. The feed pipe drain is located at the base of a set of concrete steps leading to the equipment room for the 482A/T-58 Water Storage Tank. The Water Storage Tank is a concrete structure with a subgrade equipment room and concrete

steps leading to the equipment room.

Waste Type: Stormwater Runoff

Waste The site receives stormwater runoff from the 482A/T-58 Water Storage Tank and Equipment

Description: Room Structure. The flow rate is less than 0.038 liters (0.01 gallons) per minute.

Site Code: 400 FD10A Classification: Rejected (12/3/1998)

Site Names: 400 FD10A, 400 Area French Drain 10A, ReClassification:

482A Building -T-87 Stormwater,

Miscellaneous Stream #24, Injection Well

#10A

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The site is either a concrete or vitrified clay pipe filled with gravel (H-4-14647). The disposal **Description:** structure is not visible in the field. The drawing (H-4-14647) states that the drywells shall be

structure is not visible in the field. The drawing (H-4-14647) states that the drywells shall be located in the field so that they are 12.2 meters (40 feet) minimum from the nearest building line

and 3.05 meters (10 feet) minimum from utilities and other structures.

The pipe (cast iron soil) invert is to the top of the french drain. Connections (elbows) are made with 45 degree laterals. The top of the french drain is covered by a polyethylene sheet and a 5.1

centimeter (2 inch) thick redwood or cedar wooden cover.

The feed pipe is a 10.2 centimeter (4 inch) diameter steel pipe (drain line) with metal grate cover that is flush with the surrounding concrete paved area. The feed pipe drain is located at the base of a set of concrete steps leading to the equipment room for the 482B/T-87 Water Storage Tank. The Water Storage Tank is a concrete structure with a subgrade equipment room and concrete steps leading to the equipment room.

Waste Type: Stormwater Runoff

Waste The site receives stormwater runoff from the 482B/T-87 Water Storage Tank and Equipment

Description: Room Structure. The flow rate is less than 0.038 liters (0.01 gallons) per minute.

Site Code: 400 PPSS Classification: Accepted

Site Names: 400 PPSS, 400 Area Process Pond and **ReClassification:**

Sewer System, 4904 Process Sewer System,

4904 Process Sewer Main, 4608

Percolation Pond, 4608B Control Structure

and Process Sewer Sampling Site

Site Type: Pond Start Date: 1979

Site Status: Active End Date:

Site Description:

This site is the 400 Area Secondary Cooling Water (400 Area Process Sewer). The unit consists of underground piping, a control structure, and two percolation ponds known as 4608B and 4608C. The control structure, located near the 4607 Sanitary Sewer septic tank, is a corrugated metal building. A 30.5 centimeter (12 inch) main pipeline carries effluent from the 400 Area to the control structure, then northeast to the percolation ponds. Five 15.2 centimeter (6 inch) diameter pipes discharge process water from the four contributing facilities (see Process Description) into the main pipe (two pipes from FMEF, and one pipe each from the other three facilities). The ponds are 30.5 meters (100 feet) long, 15.3 meters or 23 meters (50 feet or 75 feet) wide, and 1.2 meters (4 feet) deep. The process sewer pipeline empties into a diversion box that is built into the wall that separates the two ponds. Each pond is connected to the diversion box by a 35.6 centimeter (14 inch) vitrified clay pipe. The ponds are enclosed by an 2.4 meter (8 foot) chain-link fence that has an unlocked, open gate. Each pond appears as a vegetation covered area that is recessed 1.2 to 1.8 meters (4 to 6 feet). The sampling location for the process sewer is contained in the flow metering hut (4608B) located just north of the northern fence line of the 400 Area.

The following is a list of source contributors and their status. Numbering/naming conventions, e.g., FMEF-352, 36B, 4M-92-00240/M are specific to facility locations, systems, and Engineering Change Notice/Work Package within the FFTF Complex. Note that some of the original source contributors have been plugged or bermed to prevent cooling water from entering the process sewer.

15	Floor Drain - FMEF-404	36B system drain plugged.
16	Floor Drain - FMEF-238	36B system drain plugged.
17	Floor Drain - FMEF	Routed to 36B system.
18	Floor Drain - FMEF-307	36B system drain plugged.
19	Floor Drain - FMEF	Routed to 36B system.
20	Floor Drain - FMEF	Routed to 36B system.
21	Floor Drain - FMEF	36B system drain plugged.
22	Floor Drain - FMEF	Routed to 36B system.
22	Elean Dusin EMEE	26D and an alread h. 4M 02

- Floor Drain FMEF 36B system plugged by 4M-92-00240/M. Floor Drain FMEF-204 36B system plugged by 4M-92-00240/M.
- Floor Drain FMEF-206 36B system plugged by 4M-92-00240/M.

26	Floor Drain - FMEF	Routed to 36B system.
27	Floor Drain - FMEF	Routed to 36B system.
28	Floor Drain - FMEF-300	36B system plugged by 4M-92-00240/M.
29-42	Floor Drain - FMEF-352	36B system plugged by 4M-92-00240/M.
44-47	Floor Drain - FMEF	Bermed to prevent spills from discharging
		to process sewer.
49-51	Floor Drain - FMEF	Bermed to prevent spills from discharging
		to process sewer.
60	Equipment Drain	Bermed to prevent spills from discharging
		to process sewer.
62	Floor Drain 0 MASF-HB	Drain has been permanently plugged.
63	Floor Drain - MASF-HB	Bermed to prevent spills from discharging to process sewer.
64	Air Compressor Cooling	
	Water - MASF-ER	Bermed under 4A-92-00065/W.
65	Equipment Drain -	
	MASF-ER	Bermed under 4A-92-00065/W.
66	Floor Drain in 481-A	A rubber plug has been installed
		on the drain cover under 4F-92-00940/W.
67	Sanitary Water Pump	
	Leakage - 481-A	Drains service pump seal; 4 inch collars
		have been installed.
68	Equipment Drain - 481-A	Drains service pump seal; 4 inch collars
		have been installed.
69	Equipment Drain - 481-A	Drains service pump seal; 4 inch collars
		have been installed.
70	Janitor Sink - 481-A	Drains service pump seal; 4 inch collars
		have been installed.

Waste Type: Process Effluent

Waste Description:

The process sewer, which empties into the process ponds, is for discharge of water from cooling systems and nonsanitary drains and sumps in the 400 Area facilities, including the Fast Flux Test Facility (FFTF). Water from the FFTF and FMEF cooling towers contains nonregulated quantities of algicides and other treatment chemicals, including a biocide (Dearcide 702), a microbiocide (sodium hypochlorite), and a softening agent (Dearborn 878). Chemicals used for secondary cooling water testing (Dearborn Code 550, 562, 595, 899, 904) are also present in unregulated quantities. Effluent flow varies from approximately (10 gallons per minute) in winter months to approximately (50 gallons per minute) in peak summer months.

The following waste streams are produced from each of the listed processes.

Process Name	Waste Stream Name
1. FFTF Cooling Water	Cooling Water System
2. FMEF Cooling Water	Cooling Water System
3. FFTF Containment H & V	Moisture Condensate from Ambient Air
4. FMEF Containment H & V	Moisture Condensate from Ambient Air
5. Paint Shop Spray	Filter Water from H & V
6. MASF Large Diameter Cleaning Vessel	Pump Water for Testing of Mitigation Pump
7. MASF Bearing Cooling Water	Bearing Cooling Water from Pump Test Runs
8. FMEF Retention Water	System 36B
9. FMEF Waste System	System 36D

Notes:

The water used in the cooling towers is recycled through the system 2.5 times or until the conductivity reading has reached 1,200 umhos. The chemical containers for the cooling tower

treatment are rinsed out and the rinsate is added to the cooling tower sump.

The FFTF and FMEF recycle lubricants offsite.

The total water usage at the site is 471,232.5 liters per day (124,500 gallons per day) (average) and 727,477 liters per day (192,200 gallons per day) (maximum). The water source is a Hanford Site well designated as a drinking water well (Well 499-S1-8J).

Site Code: 400 RFD Classification: Rejected (12/3/1998)

Site Names: 400 RFD, 400 Area Retired French Drains ReClassification:

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The sites cannot be positively described, although most french drains in the 400 area are 1.5 meter

Description: (5 foot) long, 1.2 meter (4 foot) diameter concrete or vitrified clay pipes filled with gravel.

Waste Type: Water

Waste The retired french drains received unknown amounts of water used during construction for washing components prior to installation. The combined hazardous chemical inventory for

washing components prior to installation. The combined hazardous chemical inventory for the drains reportedly includes 40 kilograms of sodium dichromate. Based on reviews of available

technical information, this information has not been substantiated.

Site Code: 400 RSP Classification: Accepted

Site Names: 400 RSP, 400 Area Retired Sanitary Pond ReClassification: Rejected (12/15/1998)

Site Type:PondStart Date:1972Site Status:InactiveEnd Date:1979

Site This site was one component of a sanitary sewer system that supported the temporary facilities during construction of the FFTF. The site was a sanitary sewer pond that has been backfilled and

is not visible. It currently appears as a vegetation-free, cobble-covered area. Originally, the site was 152 meters (500 feet) long and (152 meters) (500 feet) wide. Three square unlabeled manholes that provided access to the sanitary sewer pipelines (now abandoned in place) are located in the area and each manhole is adjacent to two 9 meter (3 foot) high metal posts.

Waste Type: Sanitary Sewage

Waste The unit received 45,420 liters (12,000 gallons) per day of aqueous wastes from a portable sanitary sewage treatment plant that was located several hundred feet away from the pond.

sanitary sewage treatment plant that was located several hundred feet away from the pond. Nonhazardous sludges were taken offsite for disposal while the plant and pond were operating.

Normazardous studges were taken offsite for disposar while the plant and politi were operating

Site Code: 400 RST Classification: Accepted

Site Names: 400 RST, 400 Area Retired Septic Tanks ReClassification: Rejected (1/27/1999)

Site Type:Septic TankStart Date:1979Site Status:InactiveEnd Date:1983

Site Description:

Three septic tanks are shown on drawing H-4-152051 and are listed as inactive waste disposal units in the Hanford Site Waste Management Units Report. There are no signs to mark the septic tanks. Surface features in the locations indicated on the drawing include two steel manhole covers near the southeast portion of 4702. One lid was partially covered with gravel. It is bolted down in the center and has perforated holes around its perimeter. The second manhole cover is posted with a "Danger: Limited Access, Confined Space, Class II" sign. On the east side of the center wing of 4702 Building is a 0.6 meter (2 foot) square concrete pad with a white 10 centimeter (4 inch) diameter PVC vent pipe protruding from the center. On the west side of the 4702 Building is a steel manhole that is surrounded by four yellow posts. It is also posted with a Confined Space, Class II sign. South of this manhole (on the west side of 4702 Building) is another 0.6 meter (2 foot) square concrete pad with a white 10 centimeter (4 inch) diameter PVC vent pipe protruding from the center.

Waste Type: Sanitary Sewage

Waste The units received unknown amounts of sanitary wastes from office buildings.

Description:

Site Code: 400 SBT Classification: Rejected (12/3/1998)

Site Names: 400 SBT, 400 Area Sand Bottom Trench, **ReClassification:**

400 Area Retired Sand Bottom Trench, Cooling Tower Overflow Trench

Site Type: Trench Start Date: 1979

Site Status: Inactive End Date:

Site A concrete-lined trench 61 meters (200 feet) long, 1 meter (3 feet) wide, and 0.3 meters (1 foot)

Description: deep, covered with steel grating. The site collects overflow water from the 483 Cooling Tower

pad and directs it to the process sewer. The is no known contamination or postings at the site.

Waste Type: Water

Waste The 400 Area Sand Bottom Trench reportedly received an unknown amount of non-hazardous **Description:** cooling tower blowdown. Site personnel state that the Cooling Tower Overflow Trench

cooling tower blowdown. Site personnel state that the Cooling Tower Overflow Trench continues to receive non hazardous blowdown, also known as secondary cooling water. Secondary cooling water contains non-regulated quantities of a biocide, a microbiocide, and a softening agent. Chemicals used for secondary cooling water testing are also present in non

regulated quantities.

Site Code: 400 SS Classification: Accepted

Site Names: 400 SS, 400 Area Sanitary Sewer, 4608 ReClassification: Rejected (1/27/1999)

Sanitary Sewer, 4608 SS

Site Type:Septic TankStart Date:1983Site Status:InactiveEnd Date:1998

Site The unit is a septic tank with a 11,355 liter (3000 gallon) capacity. The surface features of the septic tank were two fiberglass manhole covers. One of the manhole covers was posted with a

"Danger: Confined Space" sign. The area is covered by vegetation.

Waste Type: Sanitary Sewage

Waste Description:

Site personnel report the unit may have received waste from the T-100, T-101, T-102, T-103, T-104, T-105, T-106, T-107, T-108, and T-109 trailers. The tank received 2,839 liters (750 gallons) of sanitary waste each day. Effluent from this septic tank was discharged to the 4608 Sanitary Tile Field.

ReClassification: Rejected (1/27/1999)

Site Code: 400 STF Classification: Accepted

Site Names: 400 STF, 400 Area Sanitary Tile Field,

4608 Sanitary Tile Field, 4608 STF

Site Type:Drain/Tile FieldStart Date:1983Site Status:InactiveEnd Date:1998

Site The sanitary tile field is located within and at the west end of a vegetation-covered area that is

Description: bounded by steel posts and barricade chain. The 4608 Sanitary Sewer septic tank (400 SS) is on the east end of the chained area. The chained area is posted with a blue-and-white sign that reads

"No Vehicles--Septic Field." The tile field has no surface features.

Waste Type: Sanitary Sewage

Waste The unit received liquid wastes from the 4608 Sanitary Sewer septic tank. Site personnel report

Description: the tank and tile field may have received wastes from the T-100, T-101, T-102, T-103, T-104, T-

105, T-106, T-107, T-108, and T-109 trailers.

Site Code: 400-1 Classification: Accepted

Site Names: 400-1, 400-1 Dump Site ReClassification: Rejected (12/15/1998)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is an area of soil mounds containing waste material. The mounds vary in content from

Description: backfill material (soil and rocks) to chunks of concrete, red volcanic landscaping rocks, metal

piping, rebar, chunks of asphalt, and signs. The mounds are from 0.6 to 1.5 meters (2 to 5 feet) high. Some are partially covered with natural vegetation. The entire site is raised approximately

1.5 meters (5 feet) above the perimeter road that surrounds the 400 Area.

Waste Type: Construction Debris

Waste The site contains piles of soil, concrete and rubble, a small amount of miscellaneous materials

Description: such as traffic markers and landscape rocks, and a few pieces of concrete asbestos board.

Approximately 6 half 208 liter (half 55 gallon) drums (cut in half) are also present.

Site Code: 400-2 Classification: Rejected (12/3/1998)

Site Names: 400-2, Concrete Batch Plant ReClassification:

Site Type: Process Unit/Plant Start Date: 1972

Site Status: Inactive End Date:

Site The site is a vegetation-free, cobble-covered area that is surrounded by a 2.4-meter (8-foot) high

Description: chain-link fence. A concrete building foundation is located at the southwest corner of the fenced

area, with rebar and wooden supports protruding from its surface. Several material staging areas

contained raw materials for the concrete production. They are open ended, concrete walled bins, located near the building foundation. There is a metal lined pit inside the fenced area that has been used to train employees to use fire extinguishing equipment.

Site Code: 400-3 Classification: Rejected (12/3/1998)

Site Names: 400-3, 400 DT, 400 Area Drainage Trench, ReClassification:

400 Area Storm Drain Outfall Trench,

Miscellaneous Stream #732

Site Type:TrenchStart Date:Site Status:ActiveEnd Date:

Site This trench emerges just north of the perimeter road, at the northeast corner of the 400 Area, and travels north-northeast for approximately 90 meters (300 feet). The sides of the trench are

covered with cobblestones, and the bottom is covered with cobblestones and sand. At its starting point near the perimeter road, the trench is 9 meters (30 feet) wide and 6 meters (20 feet) deep. There is no obvious end to the trench, as it narrows down and eventually becomes an area of

disturbed vegetation.

Waste Type: Stormwater Runoff

Waste Site personnel report that the unit receives storm runoff from various drains throughout the 400 **Description:** Area. The Inventory of Miscellaneous Streams Report (DOE/RL-95-82) states this trench

Area. The Inventory of Miscellaneous Streams Report (DOE/RL-95-82) states this trench receives less than 0.038 liters per minute (0.01 gallons per minute) of stormwater runoff.

Site Code: 400-4 Classification: Accepted

Site Names: 400-4, Suspected Burial Ground (East of ReClassification: Rejected (12/3/1998)

FFTF)

Site Type:Burial GroundStart Date:Site Status:InactiveEnd Date:

Site The site visit done in 1994 to support the 300-FF-2 Operable Unit Technical Baseline Report indicated the site appeared to possibly be a closed burial ground that had been covered with soil

indicated the site appeared to possibly be a closed burial ground that had been covered with soil. Large mounds of soil are located on the north side of a flat area that measures approximately 30 by 15 meters (100 by 50 feet). The soil has been mounded approximately 3 to 6 meters (10 to 20 feet) above the surrounding terrain. Vegetation on the mound is sparse. In 1994, some waste,

such as a glove and an electrical cable, were partially visible.

Waste Type: Misc. Trash and Debris

Waste A small amount of visible surface debris. A glove and an electric cable.

Description:

Site Code: 400-5 Classification: Accepted

Site Names: 400-5, Septic Tank or Cistern ReClassification: Closed Out (12/3/1998)

Site Type:Septic TankStart Date:Site Status:InactiveEnd Date:

Site Prior to 1998, a concrete pipe emerged from the ground approximately 6 meters (20 feet) north of

Description: a building foundation. The pipe had an inside diameter of 0.6 meters (2 feet) and was loosely

covered with a wooden cover. It dropped approximately 4.6 meters (15 feet) into a concrete or concrete-lined circular vault. On September 16, 1998, the site was backfilled with sand slurry. It is currently surrounded by "Caution" tape.

400-6 **Site Code: Classification:** Accepted

Site Names: 400-6, Material Dumping Area (North of **ReClassification:** Rejected (12/3/1998)

FFTF), Material Dumping Area and

Building Foundation

Site Type: Dumping Area Start Date: Inactive **End Date: Site Status:**

The site consists of a building foundation, sidewalks, and construction and demolition debris. Site

Description: The concrete building found is approximately 23 meters (75 feet) long and 7.6 meters (25 feet)

wide. A portion of the building remains standing. That portion is made of painted concrete blocks with a corrugated metal room. The floor slopes to a centered drain. Lumber at the site

indicates that the rest of the building may have been of wood construction.

Waste Type: Construction Debris

Waste Debris scattered randomly at the site includes glass, metal, bricks, and wood from the building; wooden pallets; chunks of concrete; metal scraps; concrete core samples; and other construction **Description:**

materials. Surplus concrete and asphalt were also poured in an area at the north end of the site.

400-7 **Site Code: Classification:** Accepted

Site Names: 400-7, 4607 SSST, 4607 Sanitary Sewer **ReClassification:** Rejected (1/27/1999)

Septic Tank, 4607 SS, 4607 Sanitary Sewer

1978 **Site Type:** Septic Tank **Start Date:**

1997 **Site Status:** Active **End Date:**

The unit is surrounded by an 2.4 meter (8 foot) high chain-link fence that is topped with three Site strands of barbed wire. The gate is unlocked and open. The top of a concrete structure with six **Description:** metal access hatches is located on the west side of the fenced area. The hatches are marked with "Confined Space" signs. The septic tank inlet, which appears to be a circular concrete tank, is located approximately 3 meters (10 feet) from the south end of the concrete structure, just outside

of the fence.

Hanford Drawing, H-4-38162, Civil Drawing Index Plot Plan, shows the various components of the system. They are the 4607 Septic Tank (WIDS Site 400-7, 4607 Leaching Field (WIDS Site 400-12), 4607 Sanitary Sewer Lagoon (WIDS Site 400-11). Note that this drawing shows the

percolation ponds that belong to the process sewer system (WIDS Site 400 PPSS).

Waste Type: Sanitary Sewage

Waste Site personnel report that this unit receives all sanitary wastes from 400 Area buildings except the wastes from a few trailers serviced by the 4608 Sanitary Sewer. The tank was designed to **Description:**

handle a flow rate of 230,000 liters per day (60,000 gallons per day). Reported flow rates include 23,000,000 liters per year (6,000,000 gallons per year), 57,000 liters per day) 15,000 gallons per day, 42,000 to 49,200 liters per day (11,000 to 13,000 gallons per day) of effluent, and 87,400 liters per day (23,100 gallons per day) of "influent and effluent." From 1978 to 1986, effluent was discharged through an underground 20 centimeter (8 inch) PVC pipe to the

4607 Sanitary Tile Field.

Site Code: 400-8 Classification: Accepted

Site Names: 400-8, Construction Material Dumping ReClassification: Rejected (12/3/1998)

Area (North of FFTF)

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site Currently, the dumping area appears as a field that is a partially covered with vegetation and

Description: strewn with debris. The debris consists primarily of construction and demolition waste. There are

no boundaries to clearly define the size of the dumping area.

Waste Type: Construction Debris

Waste Material dumped at the site includes tires, concrete rubble, metal fencing, rebar, metal grating,

Description: sheet metal, piping, and metal scraps.

Site Code: 400-9 Classification: Accepted

Site Names: 400-9, 400 RPSSTP, 400 Area Retired ReClassification: Rejected (12/3/1998)

Portable Sanitary Sewer Treatment Plant

Site Type:Sanitary SewerStart Date:1972Site Status:InactiveEnd Date:1979

Site The site was a temporary sanitary sewage treatment plant. There is no visible evidence from the

Description: surface of the underground lines that remain in place, the removed treatment plant, or the

backfilled pond.

Waste Type: Sanitary Sewage

Waste Approximately 45,000 liters per day (12,000 gallons per day) of aqueous effluent from the treatment plant was transferred through underground lines to the pond, which was located just

west of the current 4706 Building site. An unknown amount of that effluent leaked from sanitary sewer manholes and the outfall prior to late 1975 or early 1976. Nonhazardous sludges from the

treatment plant were hauled offsite for disposal.

Site Code: 400-10 Classification: Rejected (12/3/1998)

Site Names: 400-10, 400 FD11, 400 Area French Drain **ReClassification:**

#11, 453B Switch Gear Pad Stormwater, Miscellaneous Stream #26, Injection Well

#11

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The site is a french drain. The visible portion is a 38 centimeter (15 inch) tall metal pipe, 10

Description: centimeters (4 inches) in diameter. On two sides are 20.32 centimeter (8 inch) tall metal bars that are connected by a cross member. The drain is surrounded by four 1.2 meter (4 foot) tall yellow

steel posts and is in the middle of a gravel covered field. The pipe is capped with a metal plug

that has a raised square on top.

Waste Type: Stormwater Runoff

Waste The unit receives stormwater from the 453-B Switchgear Pad. The flow rate is less than 0.038

Description: liters per minute (0.01 gallons per minute).

Site Code: 400-11 Classification: Accepted

Site Names: 400-11, 4607 SSL, 4607 Sanitary Sewer ReClassification: Rejected (1/27/1999)

Lagoon, 400 Area Wetlands

Site Type:PondStart Date:1986Site Status:InactiveEnd Date:1996

Site The site is a sanitary sewer lagoon that is currently dry. It has been backfilled and vegetated with **Description:** grasses. The north and west sides are slightly depressed, but the south and east sides slope

grasses. The north and west sides are slightly depressed, but the south and east sides slope upward to the surrounding terrain. The adjacent terrain is covered with sagebrush and tumbleweeds. Signs are still present around the perimeter of the lagoon that state "Treated"

Sewage".

Shortly after the 4607 Sanitary Sewer and the 4607 Sanitary Tile Field began operating in 1978, sanitary effluent began surfacing in the location of the drain field and overflowing into a natural depression nearby. In 1986, the drain field failed completely, causing effluent to overflow through a manhole and enter the depression through a drainage ditch. A valve pit diversion box was subsequently installed to divert the waste stream to the natural depression. It became known as the 4607 Sanitary Sewer Lagoon and the 400 Area Wetlands. The lagoon was deepened, a berm was constructed around it. The existing drainage ditch was backfilled.

Waste Type: Sanitary Sewage

Waste From 1986 to 1996, all sanitary effluent from the 4607 Sanitary Sewer has been discharged from the septic tank to the lagoon. Reported flow rates include 23,000,000 liters per year (6,000,000 liters per year).

gallons per year) in 1987, 57,000 liters per day (15,000 gallons per day) in 1989, 42,000 to 49,200 liters per day (11,000 gallons per day) of influent and effluent in 1993. The theoretical combined evapotranspiration and percolation rate of the pond, based upon the 1993 flow rate is

187 liters per square meter per day (4.6 gallons per square foot per day).

Site Code: 400-12 Classification: Accepted

Site Names: 400-12, 4607 STF, 4607 Sanitary Tile ReClassification: Rejected (1/27/1999)

Field, 4608A Sanitary Sewer Leaching

Field, 4608A Leaching Field

Site Type:Drain/Tile FieldStart Date:1978Site Status:InactiveEnd Date:1986

Site There are no visible surface features to identify this tile field. The tile field consisted of

Description: perforated 10 centimeter (4 inch) diameter PVC pipe that discharged sanitary effluent by gravity.

The pipe sloped 0.25 meters for every 30.5 meters (3 inches for every 100 feet) of length. The tile field was filled with 0.3 meters (3 feet) of gravel and was covered with "untreated building paper." Approximately 490 meters (1,600 feet) of PVC pipe connected the tile field with the

4607 Sanitary Sewer septic tank.

Per Curt Clement, Dyncorp, the drain/tile field was abandoned in-place years ago when it originally failed. The tie-in has been plugged.

Waste Type: Sanitary Sewage

Waste Description:

The 4607 Sanitary Sewer received all sanitary wastes from 400 Area buildings except the wastes from a few trailers serviced by the 4608 Sanitary Sewer. Between 1978 and 1986, the tile field received liquid effluent from the 4607 Sanitary Sewer septic tank. The tank may have received effluent at a rate of 23,000,000 liters per year (6,000,000 gallons per year) in 1987, 57,000 liters per day (15,000 gallons per day) in 1989, 42,000 to 49,200 liters per day (11,000 to 13,000 gallons per day) in 1992, and 87,400 liters per day (23,100 gallons per day) in 1993.

Site Code: 400-13 Classification: Accepted

Site Names: 400-13, Waste Dumping Site (East of ReClassification: Rejected (12/15/1998)

FFTF)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is a dumping area. Debris has been dumped in several areas, scattered over an area **Description:** Occupying approximately 1.2 hectares (3 acres). One of the dumping areas was possibly fenced

occupying approximately 1.2 hectares (3 acres). One of the dumping areas was possibly fenced in the past, since two corners are framed by wooden posts with fallen fence rails and chicken-wire

fencing.

Waste Type: Misc. Trash and Debris

Waste Tree limbs, bags of leaves, and other debris are scattered in several locations along the east side **Description:** of the dirt access road. Additional areas further away from the road contain fire bricks, black

rubber gloves, metal buckets, rusted tin cans, broken glass jars, electrical wiring, metal mesh screening, caulking guns, wood scraps, large chunks of building concrete, semi-circular wooden

wall sections, and other waste materials.

Site Code: 400-14 Classification: Accepted

Site Names: 400-14, Burn Pit (East of FFTF) ReClassification: Rejected (12/15/1998)

Site Type:Burn PitStart Date:Site Status:InactiveEnd Date:

Site The 1994 site visit that supported the 300-FF-2 Technical Baseline Report stated the site was a **Description:** large burn pit containing some visible, fire-scarred debris at the east end. Blown-in tumbleweed

large burn pit containing some visible, fire-scarred debris at the east end. Blown-in tumbleweeds were piled within the pit and some natural vegetation had begun to grow along the pit's walls. The

unit's appearance indicated it has not been used for some time.

Waste Type: Misc. Trash and Debris

Waste Fire-scarred metal mesh screening, rags, wood scraps, and fire bricks are visible within the pit,

Description: particularly at its east end.

Site Code: 400-15 Classification: Rejected (Proposed)

Site Names: 400-15, Diesel Fuel Tank Fitting Leak **ReClassification:**

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1994

Site The site was an unplanned release discovered during the removal of two fuel (1 diesel and 1

Description: unleaded) tanks.

The tanks served as unleaded gasoline and diesel fuel storage tanks for the 400 Area fire station. The tanks which were installed in 1986, were double-wall fiberglass construction and each had a capacity of 1,892.5 liters (500 gallons). Prior to excavation of the two tanks, a site check was performed which did not reveal any evidence of surficial contamination. The general condition of the fueling station was clean and appeared to be well maintained. Excavation for removal of the tanks was initiated on 5/9/1994. Removal of the concrete pad covering the tanks revealed hydrocarbon staining around both pump lines. No staining was evident above the tank structures. Inspection of the tanks after removal indicated that the integrity of both tanks was good. In addition, there was no indication from the tank wall surfaces or the soil directly around the tanks that leakage had occurred. Once the tanks were removed, soil samples were collected for laboratory analysis from the tank excavations, the spoils piles, and the soil around the pump piping.

Excavation of the soil was initiated by the subcontractor who was removing the storage tanks. This excavation resulted in the removal of the contaminated soil at the site. The soil contamination found under the tanks and pump island were cleaned up and safely stored for later treatment. Soil samples were obtained and sent for independent laboratory analysis. The completion date for this activity was 5/25/1994.

By August 1994, the 15.2 meter (50 foot) long and 9.1 meter (30 foot) wide tanks were removed. The excavation pit had been backfilled nearly to grade with clean soil and covered with gravel. All signs, barricades, and piles of soil had been removed.

Waste Type: Oil

Waste Description:

Two empty underground tanks were unearthed and moved from this site on May 10, 1994. One of the tanks had held diesel fuel, and the other had held unleaded gasoline. The soil underneath was discovered to have been contaminated with fuel. Approximately, 400 cubic yards of contaminated soil was excavated and removed to a bioremediation pit. Maximum soil concentrations were 4,500 parts per million (milligrams per kilogram) and 660 parts per million (milligrams per kilogram) for diesel and gasoline respectively. The soil sampling results indicated that at a depth of (30 feet), gasoline concentration was less than 20 parts per million and the diesel concentration was less than 50 parts per million. These limits were below the regulatory limits of WAC 173-340. As a result, the hole was backfilled with clean soil.

Site Code: 400-16 Classification: Accepted

Site Names: 400-16, 4831 Flammable Storage Facility, ReClassification: Rejected (12/3/1998)

4831 FSF

Site Type:StorageStart Date:Site Status:InactiveEnd Date:

Site Description:

The unit is a yellow, corrugated metal building and a fenced concrete pad to the south. The pad is 6.1 meters (20 feet) wide and 15.2 meters (50 feet) long, surrounded by a 1.8 meter (6 foot) high chain-link fence with a locked gate. The building is about 6.1 meters (20 feet) high, 6.1 meters (20 feet) wide, and 15.2 meters (50 feet) long. A walk-in door and a roll-up door, located on the south side of the building, allow access from the building to the fenced area.

Hanford Site Waste Management Units Report January 2004

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

In 1994, signs indicated that the fenced area contains nonregulated empty drums, nonregulated waste, and used oil. No hazardous chemicals were stored on the outdoor pad. In 1998, all nonregulated waste containers were removed from the outdoor concrete pad. This pad is no longer used for nonregulated waste or empty containers. The building is used to store flammable or combustible products including lubricants and alcohols.

On 9/8/1998, the facility and nonregulated waste storage pad were walked down by Mr. T. A. Dillhoff (FFTF Environmental Compliance Officer). There was some rust staining on the concrete pad, but no evidence of any chemical leakage

Site Code: 400-17 Classification: Accepted

Site Names: 400-17, Buried Construction Waste Area ReClassification: Rejected (12/15/1998)

#1, Buried Construction Waste Area

Site Type:Burial GroundStart Date:1977Site Status:InactiveEnd Date:1979

Site The site is a burial ground. The area shown on SK-4-81543 as a construction waste burial ground

Description: is partially covered by the 4843 Building and the 4843 Laydown Area. There is no visible

evidence of a burial ground at this location. Areas surrounding the 4843 facilities appear as

vegetation-free, gravel-covered fields.

Waste Type: Construction Debris

Waste Site employees report that construction wastes were buried in this unit from "about 1977" to

Description: "about 1979."

Site Code: 400-18 Classification: Accepted

Site Names: 400-18, Buried Construction Waste Area ReClassification: Rejected (12/15/1998)

#2, Buried Construction Waste Area

Site Type:Burial GroundStart Date:1972Site Status:InactiveEnd Date:1974

Site The site is a burial ground. The area shown on SK-4-81543 as a construction waste burial ground

Description: is partially covered by the 4831 Flammable Storage Facility. There is no visible evidence of a

burial ground at this location. The area is now a vegetation-free, gravel-covered field.

Waste Type: Construction Debris

Waste Site employees report that construction wastes were buried in this unit from "about 1972" to

Description: "about 1974."

Site Code: 400-19 Classification: Accepted

Site Names: 400-19, Hazardous Waste Temporary ReClassification: Rejected (12/15/1998)

Storage Facility, 400-30, 440 Building 90-Day Waste Accumulation Area

Site Type: Storage Pad (<90 day) Start Date: 1993

Site Status: Active End Date:

Site Description:

This facility consists of a tan-painted clearspan steel structure on a concrete pad. The structure's south, west, and north sides consist of steel siding, and its east side consists of 2.4 meter (8 feet) high metal chain-link fencing with two locked gates. It has a weather tight, zinc-coated steel roof with skylights and a full length roof vent. A 13 centimeter (5 inch) high and 15 centimeter (6 inch) wide concrete containment berm runs along the east side of the foundation. The facility's southeast corner is a fenced-off area, designated on drawings as a "Spill Cleanup Equipment Area," that is 3.0 meters (10 feet) long and 2.9 meters (9.67 feet) wide. Its concrete floor is raised about 15 centimeters (6 inches) from the building foundation. A section of this area is used to store clean empty drums for use as waste containers.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

The 4831 LHWSA was used to stage oils and other hazardous wastes, including solvents and ethylene glycol. Empty drums that had previously held cooling water treatment chemicals, such as the acutely hazardous Endcor 4690, were also staged at the site. The 440 HWTSF (WIDS Site Code 400-19) replaced the 4831 LHWSA as the 400 Area's less-than-90-day storage area for hazardous wastes. In August 1994, the main portion of the facility contained a white box, labeled "Spill Kit," along with wooden crates and metal cabinets. The "Spill Cleanup Equipment Area" contained several 208 liter (55 gallon) drums.

Site Code: 400-20 Classification: Rejected (12/3/1998)

Site Names: 400-20, Altitude Valve Pit T-58, **ReClassification:**

Miscellaneous Stream #31

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site was listed as a french drain located under Altitude Valve Pit T-58. This site is the source **Description:** location for WIDS Site 400 FD10. Stormwater runs into the drain at the bottom of the stairs and

is routed to the french drain, 400 FD10.

Site Code: 400-21 Classification: Rejected (12/3/1998)

Site Names: 400-21, Altitude Valve Pit T-87, **ReClassification:**

Miscellaneous Stream #32

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site was listed as a french drain located under Altitude Valve Pit T-58. This site is the source

Description: location for WIDS Site 400 FD10A. Stormwater runs into the drain at the bottom of the stairs and

is routed to the french drain, 400 FD10A.

Site Code: 400-22 Classification: Rejected (12/3/1998)

Site Names: 400-22, Altitude Valve Pit T-330 French **ReClassification:**

Drain, Miscellaneous Stream #30

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site Description:

The site was listed as a french drain located under Altitude Valve Pit T-330. No french drain exists at this location. The waste stream discharges directly to the process sewer. A drain was visually identified by opening the hatch cover and seeing a drain located in the southeast corner of the pit. Water was observed on the floor of the pit. The site is located within a confined space preventing further description of the site at the time of the inspection.

Site Code: 400-23 Classification: Accepted

Site Names: 400-23, Well Pump P-14 French Drain, ReClassification: Rejected (12/3/1998)

Miscellaneous Stream #34, 480-A Pump

House French Drain

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a square opening in the concrete floor of the 480-A Pumphouse. The site receives leakage from the P-14 Pump. An open 10.2 centimeters (4 inch) diameter pipe was observed at

the bottom of the site. The site was dry at the time of the inspection.

Waste Type: Water

Waste The french drain receives pump packing leakage from the P-14 well pump. The normal flow

Description: rate is 0.038 liters per minute (0.01 gallons per minute).

Site Code: 400-24 Classification: Accepted

Site Names: 400-24, Well Pump P-15 French Drain, ReClassification: Rejected (12/3/1998)

Miscellaneous Stream #35

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is a rectangular opening in the concrete floor of the 480-B Pumphouse. The site receives

Description: leakage from the P-15 Pump. An open 10.2 centimeter (4 inch) diameter pipe was observed at the

bottom of the site. The site was dry at the time of the inspection.

Waste Type: Water

Waste This french drain receives groundwater well water leakage from pump P-15. The flow rate for

Description: this french drain is less than 0.038 liters per minute (0.01 gallons per minute).

Site Code: 400-25 Classification: Accepted

Site Names: 400-25, Well Pump P-16 French Drain, ReClassification: Rejected (12/3/1998)

Miscellaneous Stream #36

Site Type:French DrainStart Date:Site Status:ActiveEnd Date:

Site The site is an active french drain constructed of concrete and covered with a steel lid. There is no

Description: known contamination at the site, and there were no postings. The site is actively receiving water.

The water level in the french drain was 0.46 meters (1.5 feet) deep at the time of the inspection

(10/5/1998).

Waste Type: Water

Waste The french drain receives groundwater well pump packing leakage from the P-16 pump. The **Description:** well is used to supply drinking and process water for the 400 Area. The flow rate is less than

0.038 liters per minute (0.01 gallons per minute).

Site Code: 400-26 Classification: Rejected (12/3/1998)

Site Names: 400-26, 451-A Substation and B/N Plant **ReClassification:**

French Drain

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site This site consists of two drains located in the bottom of Electrical Manhole #1. These drains

Description: remove stormwater.

Waste Type: Stormwater Runoff

Waste This unit receives intermittent discharges of stormwater from the 451-A Substation and the 400

Description: Area B/N plant. It has a normal flow rate of zero.

Site Code: 400-28 Classification: Rejected (12/3/1998)

Site Names: 400-28, FFTF Dichlorodifluoromethane **ReClassification:**

Releases

Site Type: Unplanned Release Start Date:
Site Status: Active End Date:

Site The sites are "fugitive airborne emissions" from eight centrifugal chiller units at the Fast Flux Test

Description: Facility (FFTF). These units are used to provide cooling for personnel and equipment. Each

chiller unit contains up to 3,000 pounds of dichlorodifluoromethane.

Waste Type: Chemicals

Waste The waste released was dichlorodifluoromethane, R-12, refrigerant. In Fiscal Year 1998, the R-

Description: 12 refrigerant was replaced by R-134A. This information was reported by the FFTF Technical

Point of Contact.

Site Code: 400-29 Classification: Rejected (12/3/1998)

Site Names: 400-29, FFTF PCB Containing **ReClassification:**

Transformers

Site Type:Control StructureStart Date:Site Status:ActiveEnd Date:

Site The sites are the 19 electrical transformers within the Fast Flux Test Facility (FFTF) complex

Description: containing polychlorinated biphenyls (PCBs). All of the transformers are/were located within

buildings or on the roof of buildings. Five of the transformers have been removed and disposed

of in accordance with Toxic Substances Control Act (TSCA) regulations.

Waste Type: Oil

Waste The waste is transformers containing polychlorinated biphenyl oils (Type is Askarel).

Description:

SubSites:

SubSite Code: 400-29:1

SubSite Name: 400-29:1, Transformer X-5

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 308 of the 4621E Building, 550 Level.

SubSite Code: 400-29:2

SubSite Name: 400-29:2, Transformer X-6

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 367 of the 4621W Building, 550 Level.

SubSite Code: 400-29:3

SubSite Name: 400-29:3, Transformer X-7

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 331 of the 4621E Building, 580 Level.

SubSite Code: 400-29:4

SubSite Name: 400-29:4, Transformer X-9

Classification: Rejected

ReClassification:

Description: The transformer was located on the Roof of the 4621W Building, 580 Level. This

transformer has been removed.

SubSite Code: 400-29:5

SubSite Name: 400-29:5, Transformer X-10

Classification: Rejected

ReClassification:

Description: The transformer was located on the Roof of the 4621W Building, 580 Level. This

transformer has been removed.

SubSite Code: 400-29:6

SubSite Name: 400-29:6, Transformer X-11

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 449 of the 491E Building, 580 Level.

SubSite Code: 400-29:7

SubSite Name: 400-29:7, Transformer X-12

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 452 of the 491W Building, 580 Level.

SubSite Code: 400-29:8

SubSite Name: 400-29:8, Transformer X-13

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 457 of the 491W Building, 580 Level.

SubSite Code: 400-29:9

SubSite Name: 400-29:9, Transformer X-14

Classification: Rejected

ReClassification:

Description: The transformer is located on the Roof of the 4621W Building, 580 Level.

SubSite Code: 400-29:10

SubSite Name: 400-29:10, Transformer X-25

Classification: Rejected

ReClassification:

Description: The transformer is located on the Roof of the 4621W Building, 580 Level.

SubSite Code: 400-29:11

SubSite Name: 400-29:11, Transformer X-26

Classification: Rejected

ReClassification:

Description: The transformer is located on the Roof of the 4621W Building, 580 Level.

SubSite Code: 400-29:12

SubSite Name: 400-29:12, Transformer X-28

Classification: Rejected

ReClassification:

Description: The transformer was located in Room 303 of the 4621E Building, 533 Level. This

transformer has been removed.

SubSite Code: 400-29:13

SubSite Name: 400-29:13, Transformer X-29

Classification: Rejected

ReClassification:

Description: The transformer was located in Room 365 of the 4621W Building, 550 Level. This

transformer has been removed.

SubSite Code: 400-29:14

SubSite Name: 400-29:14, Transformer X-30

Classification: Rejected

ReClassification:

Description: The transformer was located in Room 431 of the 491-W Building, 531 Level. This

transformer has been removed.

SubSite Code: 400-29:15

SubSite Name: 400-29:15, Transformer X-59

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 457 of the 491W Building, 580 Level.

SubSite Code: 400-29:16

SubSite Name: 400-29:16, Transformer X-98

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 457 of the 491W Building, 550 Level.

SubSite Code: 400-29:17

SubSite Name: 400-29:17, Transformer X-100

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 308 of the 4621E Building, 550 Level.

SubSite Code: 400-29:18

SubSite Name: 400-29:18, Transformer X-101

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 367 of the 4621W Building, 550 Level.

SubSite Code: 400-29:19

SubSite Name: 400-29:19, Transformer X-117

Classification: Rejected

ReClassification:

Description: The transformer is located in Room 452 of the 491E Building, 580 Level.

Site Code: 400-31 Classification: Accepted

Site Names: 400-31, Sodium Storage Facility, 402 **ReClassification:**

Building

Site Type:StorageStart Date:Site Status:ActiveEnd Date:

Site The Sodium Storage Facility (SSF) is designed to receive sodium drained from the Fast Flux Test

Description: Facility (FFTF) reactor coolant system. The unit consists of three 303,000 liter (80,000 gallon) tanks and one 197,000 liter (52,000 gallon) tank contained within a concrete structure

approximately 27.7 meters (91 feet) long by 27.4 meters (90 feet) by 9.1 meters (30 feet) high. The total process design capacity for the four SSF storage tanks will be 1,105,000 liters (292,000 gallons). A secondary containment sump is capable of containing the contents of two of the

303,000 liter (80,000 gallon) tanks.

Site Code: 400-32 Classification: Accepted

Site Names: 400-32, U.G. Drywell - North, ReClassification: Rejected (12/3/1998)

Construction Dry Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a large gravel filled excavation that is labeled on drawing H-4-152051 as "U.G.

Description: Drywell". The drywell is a subsurface structure and is not visible at the surface.

Waste Type: Water

Waste The gravel filled excavation was used to dispose of water that collected in the bottom of the 400

Description: Area foundation excavations during construction.

Site Code: 400-33 Classification: Accepted

Site Names: 400-33, U.G. Drywell - South, Construction ReClassification: Rejected (12/3/1998)

Dry Well

Site Type:French DrainStart Date:Site Status:InactiveEnd Date:

Site The site is a large gravel filled excavation that is labeled on drawing H-4-152051 as "U.G.

Description: Drywell". The dry well is a subsurface structure and is not visible at the surface.

Waste Type: Water

Waste The gravel filled excavation was used to dispose of water that collected in the bottom of the 400

Description: Area foundation excavations during construction

Site Code: 400-34 Classification: Rejected (12/3/1998)

Site Names: 400-34, Northwest Surface Water Drainage

Ditch, Miscellaneous Stream #733

ReClassification:

Site Type: Ditch Start Date: 1982

Site Status: Inactive End Date:

Site A surface water drainage system made of a series of ditches and culverts is shown on drawing H-4-

Description: 155518 and on H-4-150029. This ditch is shown to be northwest of the 437 building. It is

approximately 700 feet in length and exits at the northwest corner of the 400 Area.

Site Code: 400-35 Classification: Rejected (12/3/1998)

Site Names: 400-35, Southwest Surface Water Drainage ReClassification:

Ditch, Miscellaneous Stream #734

Start Date: 1982

Site Status: Active End Date:

Site A surface water drainage system exits the southwest section of the 400 Area. This system collects

Description: surface water runoff from the area west of the Reactor Area. The system is a series of underground culversts and exposed, cobble ditches. It measures approximately 2750 feet in

length. It exits the southwest corner of the reactor area near the 4790 Patrol Headquarters building as an underground pipeline. It turns south for approximately 229 meters (750 feet) along Grant Ave. It exists the security fence and runs along the FMEF parking area. It then turns to the west along Alabama Blvd. until it reaches the desert southwest of 400 Area.

Waste Type: Stormwater Runoff

Ditch

Waste The unit collects storm water runoff from the west section of the 400 Area Reactor Area.

Description:

Site Type:

Site Code: 400-36 Classification: Accepted

Site Names: 400-36, 4843 Building Temporary Transfer **ReClassification:**

Station, Sanitary Waste Check Station, 4843 Waste Inspection Facility

Site Type: Storage Start Date: 1998

Site Status: Inactive End Date:

Site The structure is a fully-insulated, bolted steel building on a concrete slab. Heat is provided by ceiling-suspended heaters. Two 3.7 meter (12 foot) roll-up doors are located on the structure's

east and west sides and can be used for moving materials into and out of the building. A large fenced laydown area adjacent to the building could be accessed through the west door. The facility also has several other doors and windows. A 8 foot (2.4 meter) wide and 10 foot (3.0 meter) tall portion of the south wall has corroded and appears rust-colored. The bottom edges of

the facility's outside walls have also corroded.

Waste Type: Misc. Trash and Debris

Waste Description:

Site Code: 400-37 Classification: Accepted

Site Names: 400-37, Fuel Oil Tank South of 4732-B **ReClassification:**

Site Type: Storage Tank Start Date:

Site Status: Unknown End Date:

Site The site is an underground fuel oil tank. There is no visual evidence of the tank on the surface.

Description:

Site Code: 400-38 Classification: Accepted

Site Names: 400-38, Fuel Oil Tank East of 4722-A **ReClassification:**

Building Pad

Site Type:Storage TankStart Date:Site Status:UnknownEnd Date:

Site The 4722-A building has been removed. The concrete pad still remains. The site is an

Description: underground fuel tank that supported 4722A. There is no visual evidence of the tank on the

surface.

Site Code: 403 FD Classification: Accepted

Site Names: 403 FD, Discharge point from the 403 ReClassification: Rejected (12/15/1998)

Building, 403 French Drain, 400 Area French Drain Discharge from 403, 400 Area Drain Discharge from 403, Miscellaneous Stream #37

Site Type: Injection/Reverse Well Start Date: 1979

Site Status: Active End Date:

Site Previously, this discharge point was mistakenly described as a french drain. A 1996 site visit has **Description:** confirmed that the discharge point is a pipe exiting the northeast side of the 403 Building. The

confirmed that the discharge point is a pipe exiting the northeast side of the 403 Building. The effluent follows an asphalt trough to a drain in the pavement. The pavement drain is part of the

400 Area Stormwater Collection System (reference H-4-38972 and H-4-158520).

Waste Type: Water

Waste The unit may receive, or may have received air washer blowdown, Heating, Ventilation, and Air

Description: Conditioning (HVAC) system condensate, and stormwater from the 403 building, as well as janitorial solutions of water and detergents. The site has been removed from the active list of

the "Inventory of Miscellaneous Streams", Revision 3, because the site does not discharge to an

engineered disposal unit. The site is part of the 400 Area Stormwater Collection System.

Site Code: 427 HWSA Classification: Accepted

Site Names: 427 HWSA, 427 Building Fuel Cycle Plant ReClassification: Closed Out (12/3/1998)

Hazardous Waste Storage Area, 427 Building Fuels and Materials Exam.

Facility HWSA

Site Type: Satellite Accumulation Area Start Date: 1985

Site Status: Inactive End Date:

Site Currently, the site described as the active Reusable Oil and Empty Drum Storage Area appears as

Description: a concrete pad approximately 9.1 meters (30 feet) long and 4.6 meters (15 feet) wide surrounded

by a 2.1 meter (7 foot) high chain link fence with a locked gate.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

The FMEF hazardous waste engineer indicates the Reusable Oil and Empty Drum Staging Area is used to stage containers of oils and lubricants, as well as empty drums. One report describes the 427 HWSA as a staging area for oils and lubricants. That description fits the Reusable Oil and Empty Drum Staging Area. However, another report states that the 427 HWSA was used as a staging area for ethylene glycol and ammonium hydroxide.

Site Code: 437 MASF Classification: Accepted

Site Names: 437 MASF, 400 Area Maintenance and **ReClassification:**

Storage Facility, 437 Maintenance and

Storage Facility

Site Type: Maintenance Shop Start Date: 1982

Site Status: Active End Date:

Site MASF consists of a main building and a two-story service wing. It is a large concrete and rust-

Description: colored corrugated metal siding building (See photo #2).

Main Building

The above grade portion of the main building is constructed of structural steel shapes. The first 3.05 meters (10 feet) elevation of the above grade exterior walls is made of 30.5 centimeters (12 inch) thick precast concrete panels containing 10.2 centimeters (4 inches) of sandwiched insulation. The remaining exterior walls above the 3.05 meter (10 foot) elevation are steel panels. Roof construction is a factory Mutual Class 1 rated insulated metal deck. The building substructure, including all the below grade cells, is concrete.

The building is designed and constructed to seismic Zone 2 requirements and wind pressure of 25 pounds per square foot.

The concrete lower exterior building wall panels were established by designed to maintain external radiation levels less than 0.2 mrem/h in accordance with DOE Standards for Radiation Protection (Chapter XI of DOE Order 5480.1).

The main building is divided equally into high and low bay sections with heights of 32 meters (105 feet) and 14.9 meters (49 feet). The entire area within the facility is serviced by a 60 ton overhead bridge crane with a 10 ton auxiliary hoist. The high bay section is serviced by a 200 ton overhead bridge crane with a 25 ton auxiliary hoist and includes repair/maintenance floor space and six below grade shielded cells for specialized storage, sodium cleaning, and maintenance services. The high bay also includes a Cask Decontamination and Maintenance Facility (CDMF) to clean and reconfigure the T-3 Shipping Casks. The low bay section includes storage, staging floor space, and the Decontamination Areas I and II shielded enclosure for low level decontamination of small tools, components, and miscellaneous equipment. The low bay also includes a Contaminated Equipment Repair Shop (CERS) for repair of decontaminated Interim Examination and Maintenance (IEM) Cell components. A 10 ton monorail hoist in the low bay supports the Decontamination Areas for handling components/equipment transported to and from the Decontamination Areas. A Shielded Cell Transfer Cask (SCTC), the SCTC air bearing carriage assembly, and the associated support structure are used for equipment transfers into and out of Decontamination Areas through the 1.01 meter (40 inch) diameter ceiling port.

Crane controls for the 200 ton crane, the 60 ton crane and the 10 ton monorail are from individual manual pendants. Protective interlocks are incorporated into the crane control circuits to prevent interference of the 200 ton, 60 ton crane, or the 10 ton hoist.

The two story service wing is physically separated from the main building by a concrete/concrete block structural wall, fire wall, and shield wall. The process equipment room, process control room, personnel support areas, health physics office, and main lobby are located on the first floor of the service wing. Personnel support areas include the monitoring room, clothing issue, change rooms, and lavatories. Two 18,925 liters (5,000 gallon) stainless steel radioactive waste storage tanks are located in a concrete shielded cell beneath the process equipment room.

Service Wing

The second floor of the service wing includes the mechanical equipment room, office space, and lunch/conference room. The mechanical equipment room contains the heating, ventilating, and air conditioning (HVAC) equipment including the air handling unit, return air fan, return air HEPA filters, and the energy recovery unit.

The loadout facility, attached to the west end of the service wing is a concrete shielded enclosure that is physically separated from the service wing by a concrete shield wall. The loadout facility is used for the transfer of radioactive liquid waste from the radioactive waste storage tanks to Hanford Site tank cars for transportation to the site disposal facilities.

Support Services

A railroad spur comes from the FFTF west track and extends through the main building, terminating at the north end of the building. A second railroad spur is provided from the loadout facility to the FFTF main track north of the MASF.

Separate water supply lines are installed from the 400 Area water system to the building to provide both fire and sanitary water services. All post indicator valves in the fire water supply piping are supervised circuit valves.

A 13.8 kV underground feeder and duct bank is installed from Substation 451-B to the MASF outdoor substation transformer which provides a 480/277-V, 3-phase, 4-W, 60 Hz building electrical service.

Low voltage drawout switchgear is used for distribution and control of building power. Each power circuit breaker has a solid state tripping device for either delayed, instantaneous, or ground fault tripping characteristics. Motor loads are fed from a motor control center. Lighting, receptacles, and other loads are fed from panelboards.

The facility is surrounded by a grounding grid. All building steel and equipment are connected to the grid. The instrumentation system uses a separate analog system that ties directly into the FFTF analog ground grid.

The MASF has a lightning protection system.

Sanitary water and fire protection water are supplied from separate mains to the building. A reduced pressure backflow preventer assembly is installed between the sanitary water and process water systems to protect the sanitary water supply.

The sanitary sewer collects effluent waste from the sanitary fixtures and floor drains in the personnel support areas. The process sewer collects nonradioactive liquid from all areas of the facility. The primary source of nonradioactive water discharged to the process sewer is the sodium removal system.

All contaminated liquid waste in the facility is discharged into radioactive liquid waste tanks. The stored radioactive liquid waste is transferred to a railroad tank car in the loadout facility for

disposal.

The Heating, Ventilation and Air Conditioning (HVAC) System supports all areas of the facility. The direction of air flow, pressure differentials and duct arrangement minimize the potential spread of contamination or the accumulation of inert gas, and potentially contaminated areas are maintained negative with respect to the outside atmosphere.

The MASF HVAC System consists of a supply air system, a return air system, and an exhaust air system. All recirculated air or exhaust air from the facility passes through a bank of HEPA filters, and the filtered air is isokinetically sampled and continuously monitored for radioactive contamination

Waste Type: Process Effluent

Waste Description:

This facility is currently being used for the decontamination of radioactive and/or sodium contaminated FFTF equipment, the repair of contaminated manipulators from the FFTF Reactor Containment Building, the staging of large pieces of equipment to be stored, repaired, or tested; and the temporary storage of low level radioactive solid and liquid wastes prior to shipment.

Radioactive liquids are generated in the sodium cleaning vessel operation and Decontamination Areas. All radioactive liquids from the cleaning vessels and Decontamination Areas discharge into the radioactive waste tanks. The radioactive liquid in the tank(s) can be transferred to a liquid waste tank car in the shielded loadout facility for disposal. The capability to transfer radioactive liquids from the cleaning vessels directly to the tank car is also provided. All liquid can be discharged from the tank car through a filter to remove radioactive particles. To minimize the potential for spillage during loadout, overflow lines are provided from the tank car to the radioactive waste tanks. In the event of spillage, a collection basin in the floor also drains back to the waste tanks. The loadout facility is isolated during filling operations to minimize personnel exposure. Personnel exits are located at the north and south ends of the facility for rapid egress if required. The facility is maintained at a negative pressure with respect to the atmosphere to prohibit any inadvertent release of contaminants to the environs.

Components or equipment containing a sodium film or small residual deposits of sodium can be transported to MASF for disposition. All sodium wetted components can be handled in inerted casks or containers and stored in inerted vessels in below grade cells. All sodium wetted components can be cleaned prior to repair/maintenance or other disposition.

Waste Type: Chemicals

Waste Description:

The chemicals to be handled in MASF are of a typical industrial nature. These include organic acids for decontamination and caustic solutions and inorganic acids for regenerating

demineralizer resins. The chemicals will be handled in fume hoods and areas appropriately vented and exhausted through a scrubber, demister, dryer and HEPA filters. Caustic rinse water from sodium cleaning operations will be present in the sodium cleaning vessels and piping

systems.

SubSites:

SubSite Code: 437 MASF:1

SubSite Name: 437 MASF:1, HVAC

Classification: Accepted

ReClassification:

Description:

The air handling unit (AH-1) provides ventilation and conditioned air throughout the facility. Makeup supply air is provided from the outside through a supply/exhaust air heat exchanger and dust filters to AH-1.

Chilled water cooling coils in AH-1 cool the makeup/recirculated air, as required by the HVAC temperature control system. Heated air is provided by electric heaters installed in individual area supply ducts.

The supply fan air is controlled at a constant discharge pressure. In the event of a building static pressure upset, such as open doors or other disturbing conditions, the static pressure sensor modulates the supply fan variable inlet vanes to maintain a constant static pressure in the discharge plenum.

The return air system normally recirculates air from noncontaminated areas and introduces the air to the supply side of AH-1 after passing through a bank of HEPA filters. The return air is isokinetically sampled and continuously monitored prior to introduction into AH-1.

Depending on temperature control demands or smoke/fire alarm conditions, the recirculated air can also be partially or fully exhausted from the facility. A flow-controlling instrumentation circuit modulates the variable inlet vanes in the return air blower as required to maintain the constant return air flow.

The exhaust air system takes exhaust air from the potentially contaminated areas for discharge to the atmosphere through HEPA filtration systems. Two exhaust air blowers (each 100% capacity) are provided in the exhaust system and operate in a lead/standby mode. The exhaust air is maintained at a constant volume flow rate by an air flow control circuit similar to the return air system. Automatic switchover from operating to idle blower is incorporated into the control system in the event of a blower system malfunction to ensure maintaining required negative pressurization in the facility. The exhaust air from Decontamination Areas I and II, CDMF, and process system contaminated vents are passed through a wet scrubber, demister, and dryer that are located upstream from the HEPA filters. Operation of the scrubber/dryer normally will involve evolutions that may produce sodium aerosols. All exhaust air passes through HEPA filters and is isokinetically sampled and continuously monitored for radioactive contamination prior to discharge from the building. Demisters are also provided on the exhaust air ducts in Decontamination Area I and Cask Decontamination and Maintenance Facility (CDMF).

A chilled water system feeds the cooling coils in AH-1 to remove heat from the supply air. The chilled water system consists of an air cooled water chiller with dual refrigerant circuits (each 50% capacity), dual chilled water circulating pumps (100% capacity) and piping, and controls to maintain air temperatures. The system configuration permits the use of one chilled water pump in the operating mode while the other chilled water pump remains on standby. Automatic switchover from the operating to the idle pump is provided in the event of pump or system malfunction. Suitable interlocks prevent the simultaneous operation of heating and cooling systems.

Self-contained HEPA filters, with prefilters, are installed as close as practical to the source of potential contaminants to minimize contamination of duct work. HEPA filters are tested at HEHF prior to installation, in place prior to system operation, and at least every two years thereafter. The HEPA filters are installed as single units or manifolded in filter banks and can be changed out as individual units without shutting down the HVAC System. Differential pressure gages are installed across HEPA filters to indicate filter loading. High differential pressure alarms are located on the HVAC control panel for all HEPA filters in the facility, except the CDMF filters.

The HVAC air flow control panel and temperature control panel are located in the mechanical equipment room. The HVAC air flow control system can be operated in a manual or automatic mode. The temperature control system operates in the automatic mode. Any offnormal condition will alarm at the HVAC control panel and the process control room panel.

All potentially contaminated areas are maintained at a negative pressure with respect to the environment and with respect to adjacent less contaminated areas to minimize the spread of potential contamination. Low range, high sensitivity differential pressure instrumentation provides indication and annunciation to the HVAC control panel, for those areas where contamination potential is greater. In addition, local alarm and indication are provided for those areas of greatest potential for contamination.

Smoke detectors are installed in the HVAC return and in selected exhaust ducts upstream from HEPA filters, and these initiate an alarm at the fire alarm control panel (FACP) if smoke is detected in the HVAC exhaust or return ducts.

In the event of a smoke/fire alarm, the supply fan automatically shuts down. The return air recirculation damper to AH-I closes, and the return air is exhausted from the building. Both the return and exhaust fans will continue to operate to exhaust smoke from the facility.

An indicated radiation level above a preset limit in the return or exhaust duct isokinetic sampling and radiation monitoring system will initiate a visible and audible alarm in the process control room to alert personnel to the off normal condition. An assessment of the cause of the alert alarm condition will be made to determine the need and nature of the required corrective action. In the event that the indicated radiation levels in either the return or exhaust duct exceeds the preset high-alarm limit, the HVAC system supply, return and exhaust fans and dampers will automatically shut down (regardless of smoke/fire alarm conditions) to preclude any potential release of radioactive contamination to the environment or dispersal of contaminants to other areas of the facility. The isokinetic sampling monitor alarm setpoints are established in accordance with applicable requirements. The isokinetic radiation monitoring panel is located in the mechanical equipment room, adjacent to the HVAC control panels.

SubSite Code: 437 MASF:2

SubSite Name: 437 MASF:2, Protective Systems

Classification: Accepted

ReClassification:

Description: Instrumentation and Control System

The instrumentation control system (ICS) provides integrated control and instrumentation for the process system. The sodium removal, nitrogen, steam, contaminated waste, process water, process sewer, and demineralized water are subsystems of this system.

Selected process system components located in administratively controlled areas are monitored and controlled in the process control room. The process control panel has visible and audible alarm annunciators.

The process control operator takes corrective action for alarm conditions. For key parameters, backup automatic action is initiated if the operator fails to respond to the alarm condition. Alarm windows are grouped by systems to aid the operator in quickly identifying the problem and facilitating corrective action.

Fire Protection System

The MASF fire protection system is designed in accordance with Fire Zone 3, Type II N requirements of the Uniform Building Code. The repair and storage area is classified as a Group B, Division 4 occupancy and the two-story service wing as a Group B, Division 2 occupancy.

The wet pipe sprinkler system and fire detection/alarm system are designed and installed in accordance with National Fire Protection Association (NFPA) requirements, for ordinary hazard, Group 2 occupancy. All equipment and devices have the Factory Mutual Engineering Corporation approval or are listed for the use intended by the Underwriters Laboratory, Inc.

Fire protection system alarm devices are zoned and arranged to provide a local fire alarm and fire zone identification at the fire alarm control panel (FACP). HVAC duct smoke detectors initiate an alarm at the FACP in the event of smoke detection. All FACP alarms are transmitted directly to the Hanford Site central fire station. The system also detects any trouble condition such as an inoperative alarm circuit, a closed post indicator valve or a normal power failure and transmits a trouble signal to the FACP and the central fire station.

Hose stations are installed in the repair and storage area in accordance with NFPA requirements.

Radiation Monitoring System

A radiation monitoring system provides radiation surveillance throughout the facility and alarms in the event of above normal radiation levels. The radiation monitoring system consists of remote area monitors, continuous air monitors, and fixed room air samplers. All liquid and gaseous effluents are monitored to prevent releases of radioactivity to the environment.

The local area gamma-radiation monitors visibly and audibly alarm locally and process radiation monitors alarm in the process control room in the event that radiation levels exceed pre-established radiation limits.

Hand and shoe counters are installed at all established exits from potentially contaminated areas to control the possible spread of contamination to other building areas.

Oxygen-Deficient Atmosphere

The principal inert gas present in the MASF is nitrogen, although an argon inerted component cask or container may be shipped to MASF providing the possibility that argon gas could also be present in the facility. Oxygen deficiency monitors are located in confined areas such as the mechanical service tunnel, Large Diameter Cleaning Vessel (LDCV) cell, test cell, Decontamination Areas I and II, and all stairwells where an oxygen deficient atmosphere might occur. The monitors provide an audible and visible alarm.

HVAC supply and exhaust ducting is arranged to ensure maximum circulation to prevent the accumulation of nitrogen or argon gas in confined areas.

Breathing Air System Alarms

Visible and audible alarms are provided at each breathing air station to indicate low air pressure and compressor trouble. The process control room has audible and visual alarms for low pressure, high compressor temperature and loss of alarm power.

Door Annunciators

Limit switches are located at all exterior personnel doors, with the exception of the main lobby door and the process equipment room personnel door. The limit switches indicate that a door is opened and that the contamination control boundary may have been compromised. The limit switches initiate a visible and audible alarm in the process control room.

Emergency Lighting

Battery powered emergency lights are strategically located throughout facility and in all stairwells and at exits to permit safe egress from the building in the event of a power failure.

SubSite Code: 437 MASF:3

SubSite Name: 437 MASF:3, Decontamination Areas

Classification: Accepted

ReClassification:

Description: Decontamination Areas I and II

The Decontamination Area shielded enclosure in the main building contains two separate shielded areas, Decontamination Area I and Decontamination Area II. Surface contaminated articles such as tools, small valves, and mechanical components are cleaned and packaged for storage, disposal, or repair.

A 5 ton monorail is provided for material handling in the Decontamination Areas. Operation of the 5 ton monorail in both Decontamination Areas is by radio control.

Decontamination Area I is used for semi-remote or spray cleaning and hands-on spray cleaning of contaminated equipment using hot or cold water, steam, and suitable detergents. Two shield windows are installed in the Decontamination Area I shield walls. Work stations, which include all penetrations necessary for the semi-remote spray cleaning of equipment, are provided at each window location. Access to Area I is through a 1.01 meter (40 inch) diameter port in the ceiling via the Shielded Cell Transfer Cask (SCTC). A I ton jib crane and electric hoist are provided on the west wall of Decontamination Area I to relocate equipment to a position clear of the 1.01 meter (40 inch) ceiling port, allowing "turn key" operation. A door from Area II to Area I is allows equipment and personnel access.

Interim Examination and Maintenance (IEM) Cell equipment transfers to and from Decontamination Area I are accomplished using the SCTC, the SCTC Air Bearing Carriage Assembly, and the associated support structure located outside and over the Decontamination Area I cell. The SCTC consists of a shielded cask, an 8 ton hoist and cover assembly, a gas system for cask inerting and purging, and a closure valve. The SCTC is lifted by an overhead crane from the Maintenance Equipment Transport System to the Air Bearing Carriage Assembly and then moved via the carriage to a position over the Decontamination Area I 1.01 meter (40 inch) diameter ceiling port. The carriage is a platform with four air cushion pads and a control system for the air pads. To support the carriage and the SCTC, a support structure is provided that contains support beams between the overhead crane access area and the Decontamination Area I ceiling port.

Area I shielding limits all adjacent areas to the design radiation level of 0.2 mrem/h for a maximum 10 R/h point source deposited on the surface of equipment. This point source approximates a I curie cobalt-60 equivalent activity deposit which is the maximum projected source to be handled in Decontamination Area I.

Decontamination Area II provides the necessary services for hands-on cleaning and

maintenance operations of small mildly contaminated parts. A 1.01 meter (40 inch) diameter ceiling port is provided in the ceiling to permit transfer of contaminated articles from the IEM Cell transfer container into Decontamination Area II. This area has a large ultrasonic cleaner, a sink with fume hood, worktable, safety shower, a solid waste compactor, service sink, and floor space for repair, packaging, and unpackaging components. The ultrasonic cleaning tank, worktable, and solid waste compactor are equipped with fume hoods. Hood exhausts discharge into the Area II HVAC exhaust duct. Large equipment double doors and a personnel airlock are also provided for access into Decontamination Area II.

Decontamination Area II can process components/ equipment with measurable radiation levels up to 20 mrem/h at 1 foot from the component. This point source approximates a 2 millicurie cobalt-60 equivalent activity deposit on the surface of equipment. As the above analysis showed that this activity was the maximum projected source to be handled in Decontamination Area II, Area II shielding has been designed to maintain the design radiation levels in adjacent areas below the design radiation level of 0.2 mrem/h while processing components/equipment with the above stated radiation levels.

SubSite Code: 437 MASF:4

SubSite Name: 437 MASF:4, Cells

Classification: Accepted

ReClassification:

Description: Below Grade Cells

The below grade cells within the high bay areas are concrete shielded enclosures, approximately 12.5 meters (41 feet) deep, and include two inert vessel cells, a large diameter cleaning vessel (LDCV) cell, a small diameter cleaning vessel (SDCV) cell, and an air and test cell. Equipment access is from above by removing the shielded floor plugs used to cover the cells. The 200 ton and 60 ton crane support these cells.

The below grade cell shielding maintains the radiation levels below 0.2 mrem/h radiation to adjacent areas. The worst case component allowed to be stored or serviced in each cell is an instrument tree in the inert vessel and LDCV cell, six reflectors in the SDCV cell, and an intermediate heat exchanger in the air and test cell). The instrument tree and reflectors experience a maximum neutron flux from the FFTF core. The Intermediate Heat Exchanger (IHX) is subjected to the maximum corrosion product deposition from the primary coolant loops of the FFTF. Source strengths for these components are provided in the facility design criteria. The maximum allowable radiation levels from the cells to the adjacent areas are 2 mrem/h in the mechanical service tunnel and below-grade cells and 0.2 mrem/h in the stairwell and above-grade high-bay area.

Inert Vessel Cells

The inert vessel cells each contain a carbon steel vessel that provides controlled inert storage atmosphere for large sodium-wetted components prior to sodium film removal and for components that have been cleaned, repaired, and are ready for reuse.

LDCV and SDCV Cells

The LDCV and SDCV cells contain the cleaning vessels for sodium film removal from sodium-wetted components.

The LDCV and SDCV cleaning vessel design pressures are 20 psig. The vessels have been designed and fabricated to the ASME Boiler and Pressure Vessel Code. The LDCV has been

hydrotested to 43 psig; the SDCV has been hydrotested to 30 psig.

Air and Test Cell

The air and test cell provides an area for maintenance and storage of large components, such as a primary pump, secondary pump, or an intermediate heat exchanger, after sodium removal.

Radioactive Waste Tank Cell

The radioactive waste tank cell is a shielded concrete enclosure located beneath the process equipment room. The cell contains two 18,925 liters (5,000 gallons) stainless steel tanks for the storage of radioactive liquid waste. The tanks were tested in accordance with the ASME Boiler and pressure Vessel Code, Section VIII, Division 1. Design pressure of the tanks is 45 psig; hydrostatic test pressure is 67.5 psig.

The cell shielding is based on the maximum source strength of the radioactive liquid stored in the tanks and has been designed to maintain the radiation levels in the process equipment room below the design radiation level of 0.2 mrem/h. The source strength used in the design calculation is provided in the facility design criteria.

SubSite Code: 437 MASF:5

SubSite Name: 437 MASF:5, Cask Decontamination and Maintenance Facility

Classification: Accepted

ReClassification:

Description:

The Cask Decontamination and Maintenance Facility (CDMF) is an unshielded, air atmosphere glovebox located in the high-bay area. The CDMF operates at a negative pressure with a once-through HEPA filtered air flow. The CDMF provides radiological containment for cleaning operations and inspections under T-3 Cask's license. Both supply and exhaust air is filtered.

Hands-on decontamination is done inside the glovebox enclosure using a water rinse system and special cask unloading, scraping, and inspection tools. The rinse water from the T-3 Cask is filtered in the CDMF adapter before it enters the Contaminated Liquid Waste System. The CDMF is serviced by a small 1/4 ton bridge crane and electric hoist that comply with all requirements for Hanford hoisting and rigging. CDMF was fabricated and helium-leak tested per HWS-12111, Amendment 1. The glovebox is equipped with an alarm for loss of negative pressure and a fire detector.

SubSite Code: 437 MASF:6

SubSite Name: 437 MASF:6, Contaminated Equipment Repair Shop

Classification: Accepted

ReClassification:

Description: The Contaminated Equipment Repair Shop (CERS) provides the necessary

services for hands-on repair and maintenance operations of Interim Examination and Maintenance (IEM) Cell components that have been decontaminated. The CERS is located in the low bay area and is operated at a negative pressure. The shop contains work tables and maintenance tools and is equipped with an overhead sprinkler system. The work tables have local HVAC exhaust drops. A I ton monorail and electric hoist services the CERS work

tables and a 4 ton electric hoist is housed in a penthouse on the roof of the CERS.

The CERS is accessed through two large equipment doors and a personnel airlock. A ceiling equipment access hatch is also provided. A pair of seal tubes over the large double doors are used for manipulator retesting. Electrical penetrations are provided for contaminated IEM Cell TV equipment repair.

SubSite Code: 437 MASF:7

SubSite Name: 437 MASF:7, Loadout Facility

Classification: Accepted

ReClassification:

Description: The loadout facility is a concrete shielded enclosure that will accommodate the FFTF and

Hanford Site tank cars for transfer and disposal of the radioactive liquid waste stored in the radioactive storage tanks. The shielding has been designed to maintain the design radiation level of 0.1 mrem/h external to the facility and 0.2 mrem/h in the process equipment room. The shielding calculations used the maximum source strength in a 75,700 liters (20,000).

gallon) tank car, as defined in the facility design criteria.

SubSite Code: 437 MASF:8

SubSite Name: 437 MASF:8, Process Systems

Classification: Accepted

ReClassification:

Description: Sodium Removal System

The sodium removal system consists of the large diameter and small diameter cleaning vessels, fluid/gas supply systems, a vacuum pumping system, water recirculation system, gas recirculation system, and drain and vent systems. Because of the piping system design, only one cleaning vessel can be used at any one time.

The cleaning process consists of recirculating a water vapor/nitrogen mixture (WVN) while venting gas to remove hydrogen. The reaction rate is controlled by monitoring the hydrogen concentration and adjusting the steam concentration as required to maintain the sodium reaction. The WVN process is continued until the moist circulating gas has completely reacted with the sodium film, as indicated by the hydrogen analyzer. The WVN process is then discontinued, and the vessel is slowly filled with hot demineralized water while the N2 flow is continued and the hydrogen gas is monitored. After a suitable recirculation period, the water is drained, followed by additional rinses as required to ensure that all sodium hydroxide has been rinsed from the item, as indicated by the pH meter. A two-stage filter, with a removal efficiency of 98% (for 0.5 millimeter particles) is included in the water recirculation system to remove radioactive particulate contaminants from the circulating water. After completion of the rinse cycle, the article is dried by recirculating warm dry nitrogen through the system. The gas recirculation system includes a gas cooler to remove moisture and a gas heater to reheat the gas to system temperature. The vessel may also be partially evacuated to facilitate the removal of moisture from the, component.

Because of the small volume of the SDCV, the gas phase is a single pass through the vessel and through the scrubber/demister, dryer, and HEPA filters to the HVAC exhaust.

A two stage filter in the water recirculation system is installed in a separate shielded enclosure in the LDCV cell. The expected maximum radiatior level of the filter is 80 rem/h within the shielded enclosure. The entire filter assembly, including filter housing, is designed for remote disconnection and removal from the system. Filter piping connections are remotely operated,

band type connections and valves are provided with reach rods to permit all required filter removal operations external to the shield enclosure. The filter removal from the enclosure will be accomplished using the FFTF solid waste cask (equipped with electrically operated internal grapple). After filter removal, filter replacement is manually accomplished in the shielded enclosure.

Gas Analyzer System

A gas analyzer system is provided to monitor oxygen, hydrogen, and moisture during the sodium cleaning process.

The gas analyzer monitors the oxygen concentration in the cleaning vessel to ensure an inert atmosphere for sodium-wetted components and detects any air in-leakage to the vessels. The oxygen analyzer is capable of detecting oxygen concentrations of <0.25% to 5% by volume. At a preset high oxygen concentration limit, the flow of steam is automatically cut off, and additional nitrogen is introduced until the oxygen concentration is within specification.

The gas analyzer monitors the hydrogen concentration to control the sodium removal process and to protect against potentially explosive concentrations in the cleaning vessels. The gas analyzer is capable of detecting hydrogen concentrations in the range of <0.25% to 5% by volume. At a preset high hydrogen concentration limit, steam flow automatically stops and full nitrogen flow is initiated.

The gas analyzer monitors the moisture concentration of both the nitrogen/steam injection and the process system nitrogen gas to control reaction rates and to indicate the end point of the drying process. The instrument is capable of detecting and indicating moisture concentrations in the range of 0.5% to 25% by volume. The instrument indication is used to control the nitrogen/steam ratio and to monitor the drying process.

Process Sewer

Nonradioactive process water from the cleaning vessel is pumped directly to the process sewer. The water is monitored for pH and radioactivity in the sodium cleaning system prior to discharge to the process sewer. Additionally, a liquid monitor in the process sewer system continually checks the discharged water for radioactivity. A removable spoolpiece is provided as a cross connect to the contaminated liquid waste system. The spoolpiece is only installed when the discharge water meets the requirements of the concentration guides in DOE Order 5480.1, Chapter XI. In the event that the discharge water does not meet minimum standards for draining to the process sewer, the water will be automatically diverted to the radioactive waste tanks.

Contaminated Liquid Waste System/Contaminated Gas Vent System

All contaminated liquid waste will be discharged directly to the radioactive waste tanks. During discharge of contaminated liquid waste to the radioactive waste tanks, the removable spoolpiece (cross-connect between the process sewer and the contaminated liquid waste system) is removed to prevent potential release of contaminated liquid waste to the process sewer. Pipe connections are blanked off with blind flanges when the spool piece is not installed.

The contaminated liquid waste in the radioactive waste storage tanks is pumped directly to a railroad tank car in the loadout facility for transport to an appropriate disposal area. All major contamination sources are filtered prior to entering the Contaminated Liquid Waste System. The ultrasonic cleaner in Decontamination Area II has a 20 micrometer in line cartridge filter. The floor drains in Decontamination Areas I and II have 50 micrometer cloth

bag filters in metal strainer baskets. The adapter drain basket on the Cask Decontamination and Maintenance Facility has a polyester filter pad insert. These filters minimize the contamination buildup in the Contaminated Liquid Waste System drain lines and storage tanks. In addition, the storage tanks can be flushed and recirculated during the loadout operation to minimize radiation buildup in the tank cell.

All contaminated gas is vented through a scrubber/demister/ dryer and HEPA filter system prior to release to the atmosphere.

Site Code: 4713-B FD Classification: Accepted

Site Names: 4713-B FD, 4713-B French Drain, ReClassification: Rejected (12/3/1998)

Miscellaneous Stream #33

Site Type: French Drain Start Date: 1979

Site Status: Active End Date:

Site The unit is a pipe that is 1.5 meters (5 feet) long and 61 centimeters (24 inches) in diameter. The **Description:** pipe is constructed of concrete and is filled with gravel. The pipe is buried vertically, extends

pipe is constructed of concrete and is filled with gravel. The pipe is buried vertically, extends above grade 15.2 centimeters (6 inches) and is covered by a metal grating. Three parallel metal

pipes emerge horizontally from the east side of the 4713 Building, then bend 90 degrees

downward and end approximately 0.3 meters (1 foot) above the metal grating.

Waste Type: Water

Waste In 1987, the site received approximately 3,785 liters (1,000 gallons) of waste water from **Description:** lunchroom sinks. In 1988, the french drain received only intermittent discharges and had a

normal flow rate of zero. The "Inventory of Miscellaneous Streams", Revision 3, states that the employee sink water and drinking fountain supply have been shut off. The eyewash station is still an active source. Routine maintenance discharges will be covered under ST 4508 (when it is approved by Ecology). The current flow rate (1998) is less than 0.038 liters (0.01 gallons) per

minute.

Site Code: 4713-B HWSA Classification: Accepted

Site Names: 4713-B HWSA, 4713-B Hazardous Waste ReClassification: Rejected (12/3/1998)

Storage Area

Site Type:Storage Pad (<90 day)</th>Start Date:1980Site Status:ActiveEnd Date:1993

Site The site consists of a 6.1 meters (20 foot) long and 6.1 meters (20 foot) wide concrete pad that is

Description: used as a satellite accumulation area. Metal cabinets, 208 liter (55 gallon) drums and a wooden

storage box were located on the pad in May, 1994.

Waste Type: Misc. Trash and Debris

Waste The site was used as an accumulation area to store waste in cabinets and drums. The wastes **Description:** were small quantity items related to FFTF maintenance activities. Wastes included fluorescent

were small quantity items related to FFTF maintenance activities. Wastes included fluorescent bulbs, incandescent bulbs, mercury vapor lamps, hazardous rags, solvents, suspected PCB-containing ballasts and capacitors, non PCB containing ballasts and capacitors, persistent

carcinogens, and printed circuit boards, and miscellaneous equipment.

4713-B LDFD Accepted **Site Code: Classification:**

4713-B LDFD, 4713-B Loading Dock ReClassification: Rejected (12/3/1998) **Site Names:**

French Drain, Miscellaneous Stream #469

French Drain **Start Date: Site Type: Site Status:** Active **End Date:**

The site is a circular metal grate located in an asphalt paved area east of the 4713-B loading Site

Description: dock. The site sits in a small depression. The site appears to be a stormwater access point to the

400 Area surface drainage system. It does not appear to be a ground disposal site.

Waste Type: Stormwater Runoff

The current "Inventory of Miscellaneous Streams", Revision 3 states that the site collects Waste **Description:** stormwater and discharges it to the 400 Area stormwater collection system. The current flow

> rate is less than 1.9 liters per minute (0.50 gallons per minute). Earlier documents, Low Volume Effluent Streams report (Milikan 1988) and the Inventory of Miscellaneous Streams Report (WHC 1993 and DOE/RL-95-82), have stated it receives cooling water from welding equipment

or sink water. This earlier data may actually refer to WIDS Site 4713-B FD.

Site Code: 4721 FD **Classification:** Accepted

Site Names: 4721 FD, 4721 French Drain, 400 Area **ReClassification:** Rejected (12/3/1998)

> French Drain Discharge from 4721 Building, Miscellaneous Stream #28

1979 **Site Type:** French Drain **Start Date:**

Site Status: End Date: Active

Site The unit is a 1.2 meter (4 foot) diameter, 1.5 meter (5 foot) long concrete or vitrified clay pipe

filled with gravel. The unit is below grade and cannot be identified visually at the location **Description:**

identified in the "Inventory of Miscellaneous Streams".

Waste Type: Water

Waste The unit may have received janitorial solutions of water and detergents. The "Inventory of

Miscellaneous Streams", Revision 3, states that the site routes stormwater from floor drains to an **Description:**

injection well on the west side of the building. The flow rate is less than 0.038 liters per minute

(0.01 gallons per minute).

Waste Type: Oil

If a spill occurred during generator operations, the unit might have received diesel oil. Because Waste

Description: oil had to be pumped up to the generator from the underground storage tank, spills should not

have occurred when the system was not operating. There are no known spills.

4722 PSHWSA **Site Code: Classification:** Accepted

Site Names: 4722 PSHWSA, 4722 Paint Shop HWSA, **ReClassification:** Rejected (1/27/1999)

> 4722 Paint Shop Hazardous Waste Storage Area, 4722-C Hazardous Waste Storage

Area

Site Type: Storage Pad (<90 day) **Start Date:** 1980 Site Status: Active End Date:

Site The Hazardous Waste Storage Area is three metal cabinets that are located on a curbed, concrete

Description: pad outside the 4722-C Building.

Waste Type: Chemicals

Waste The site is a staging area primarily for paint solvents. Signs indicate that solvent rags,

Description: antifreeze, and absorbent materials (for spill cleanup) may also be present.

Site Code: 4722-B FD Classification: Accepted

Site Names: 4722-B FD, 4722-B French Drain ReClassification: Rejected (1/27/1999)

Site Type: French Drain Start Date: 1979

Site Status: Inactive End Date:

Site The unit is described in the Hanford Site Waste Management Units Report as 1.22 meter (4 foot)

Description: diameter pipe that is 1.52 meters (5 foot) long. It is made of concrete or vitrified clay and filled

with gravel. There are no visible surface features.

Waste Type: Sanitary Sewage

Waste In 1987, the drain was described to have received 3,785 liters (1,000 gallons) per year of **Description:** wastewater from lunchroom sinks in the 4722-B building. More current documents of

miscellaneous stream discharges do not include this french drain. 4722-B employees believe the

lunch room sink is connected to the sanitary sewer.

Site Code: 4722-C FD Classification: Accepted

Site Names: 4722-C FD, 4722-C French Drain, French ReClassification: Rejected (1/27/1999)

Drain South of 4722-C, Miscellaneous

Stream #29

Site Type:French DrainStart Date:1979Site Status:InactiveEnd Date:1985

Site The Hanford Site Waste Management Units Report (1987) lists the site as a french drain that is

Description: 1.22 meter (4 foot) in diameter, concrete or vitrified clay, gravel-filled buried pipe that extends

1.5 meters (5 feet) below grade. Surface features include a 5 centimeter (2 inch) diameter pipe protruding from the south side of the 4722-C Building. The pipe emerges from the wall

approximately 0.6 meters (2 feet) above the building foundation and travels west approximately 0.9 meters (3 feet). The pipe turns 90-degrees downward and then turns 90-degrees to the south. The visible piping terminates in the gravel beside the building. No drain structure is visible.

Per Curt Clement, Dyncorp, the pipe is connected to a sink. The drainage will be eliminated.

Waste Type: Steam Condensate

Waste The source of the discharge to the french drain was eliminated by close of business on 1/28/99.

Description: The water was disconnected.

The information provided in the following paragraph has been provided for historical purposes. The Hanford Site Waste Management Units Report (1987) states the drain received water 7570

liters (2,000 gallons per year) from a sink used to wash latex paint from hands, brushes and rollers. It also states a sample was taken from the unit and found no hazardous constituents. A 1988 report (DOE/RL-88-11, Revision 0) states that the hazardous chemical inventory for this site includes 1,000 kilograms (2,200 pounds) of sodium dichromate (Reference 1). This data is unsubstantiated. In 1995, the Inventory of Miscellaneous Streams Report DOE/RL-95-82, Rev 0, Table 3-1, changed the process description to indicate the waste is condensate that originates from a water heater on the west side of 4722-C. The flow rate is listed as 0.038 liters (0.01 gallons) per minute.

A statement provided by Dyncorp on January 21, 1999 says that it is noteworthy that currently there are two sinks in this facility. The sink, located within the area where the painting is done, is connected to the sewer not the drywell.

Dyncorp has not been able to find anyone with any knowledge of what went into the drain. The 'Registration of Hanford Site Class V Underground Injection Wells', DOE/RL-88-11 contains no references that could be used to verify the statement related to the amount of sodium dichromate. It is possible this statement is in error. There is at least one other error, as the formula for sodium dichromate (Na2Cr2O7) is not NaCr2.

Site Code: 4831 LHWSA Classification: Accepted

Site Names: 4831 LHWSA, 4831 Laydown HWSA, ReClassification: Closed Out (12/3/1998)

4831 Laydown Hazardous Waste Storage Area, 4831 Flammable Storage Facility

Site Type:Storage Pad (<90 day)</th>Start Date:1984Site Status:InactiveEnd Date:1993

Site Status: Inactive End Date:

Site Currently the site is an empty concrete pad with a metal berm around its edges. The metal berm measures 5 centimeters (2 inches) tall and 5 centimeters (2 inches) wide. It runs around the pad approximately 7.6 centimeters (3 inches) inward from the edges and is bolted down. Cylindrical

approximately 7.6 centimeters (3 inches) inward from the edges and is bolted down. Cylindrical concrete anchors are attached to 1.2 meter (4 feet) high metal posts that have been placed around the edges of the pad. Most of the posts remain upright and are connected with a metal chain, although many have fallen down. A small, tan metal shed at the east end of the pad provided supply storage and a sheltered workspace when the storage area was operating. The shed is 4.9 meters (16 feet) long and 3 meters (10 feet) wide and has double sliding doors on its south side.

Waste Type: Chemicals

Waste The site was used as a staging area for oils and hazardous wastes produced and collected in the **Description:** 400 Area. Wastes staged at this site in 1977 were primarily oils, solvents, ethylene glycol, and

empty drums for cooling water treatment chemicals such as Endoor 4690, which is acutely

hazardous. These wastes were stored in containers on the pad.

Site Code: 4843 Classification: Accepted

Site Names: 4843, 4843 Building, 4843 Alkali Metal ReClassification: Closed Out (4/14/1997)

Storage Facility, 4843 AMSF, 4843 FFTF Sodium Storage, 4843 Laydown Area

Warehouse

Site Type: Storage Start Date: 1986
Site Status: Inactive End Date: 1997

Site Description:

The 4843 Alkali Metal Storage Facility was built to store dangerous and mixed alkali metal waste. The structure is a fully-insulated, bolted steel building on a concrete slab. Heat was provided by ceiling-suspended heaters. Two 3.7 meter (12 foot) roll-up doors are located on the structure's east and west sides and were used for moving materials into and out of the building. A large fenced laydown area adjacent to the building could be accessed through the west door. The facility also has several other doors and windows. A 2.4 meter (8 foot) wide and 3.0 meter (10 foot) tall portion of the south wall has corroded and appears rust-colored. The bottom edges of the facility's outside walls have also corroded. Inside the building, a rope barrier separated the dangerous alkali metal waste storage area from the mixed alkali metal storage area. Concrete blocks were used to provide shielding from the radioactive alkali metal waste.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Description:

The unit was a storage area for dangerous and mixed alkali metal wastes generated by FFTF and various other operations at the Hanford site. Dangerous and mixed alkali metal wastes that have been stored at the facility include mixed sodium waste; materials used to clean up radioactive sodium; non-radioactive sodium waste; waste radioactive sodium metal; and non-waste, non-radioactive sodium metal. Waste containers used at this facility may have included steel 19 liter (5 gallon), 114 liter (30 gallon), and 208 liter (55 gallon) drums or sealed piping and components that have been welded closed.

Site Code: 600-1 Classification: Accepted

Site Names: 600-1, Westinghouse Debris Pit ReClassification: Rejected (4/6/1999)

Site Type: Dumping Area Start Date: 1976

Site Status: Inactive End Date:

Site Description:

The site is a large depression with sandy soil and sagebrush. Part of the depressions has been backfilled with soil from adjacent areas. Metal and wood scrap can be seen on the surface. Soil subsidences (sink holes) are evident. One faded yellow sign that states "Positively No Dumping" is located on the south side of the site, adjacent to the gravel road. The sign is located in between the 600-1 trench (located on the east side of the depression) and the JA Jones Pit 1 (located on the west side of the depression). Bulldozer scars are evident on the surface.

Waste Type: Misc. Trash and Debris

Waste The site was used by the 300 Area Westinghouse facilities. It was used mostly to dispose of the **Description:** tumbleweeds that accumulated on the 300 Area fences. Some wood, pallets and miscellaneous

debris may have also been placed in this trench.

Waste Type: Chemicals

Waste October 1994 interviews with Will Kirk and Tony Day, retired Hanford employees, disclosed that aluminum silicon alloy, may have been disposed of at 600-1. Interviewees were unable to

positively confirm dumping at this site, but felt a reasonable certainty. Aluminum silicon alloy was used in its molten state as a reactor fuel cladding process dip in the 313 Building and waste

aluminum silicon alloy usually had low levels of uranium contamination.

Waste Type: Misc. Trash and Debris

Waste Roofing remnants, plastic bucket with dried paint, rebar, aluminum, bits of concrete, asphalt,

Description: wood, and plastic are visible at the site.

Site Code: 600-22 Classification: Accepted

Site Names: 600-22, UFO Landing Site ReClassification: No Action (1/27/1999)

Site Type: Dumping Area Start Date: 1942

Site Status: Inactive End Date:

Site This site appears on aerial photos as a large, asterisk-shaped area. It is a vegetation-free area that

Description: is not marked or easily distinguished on the ground from the surrounding terrain.

The vegetation in the area was removed in the 1940's to create a visual practice target for military airplanes. Some vegetation has grown back over the years and the site is not as distinct as it once was. However, the surrounding terrain has a more diverse mix of vegetation than exists in the area of the target. A pre-Hanford fence bisects part of the site. An area at the southeast corner of the site has green steel posts, but no warning signs or barricade chains are present. Within the area marked by the steel green posts is an inactive telephone pole. The site is littered with several large pieces of "practice bombs".

The site was nicknamed "UFO Landing Site" because of its appearance from the air. It's shape and the presence of dead vegetation suggest that herbicides were used to create the shape. A site visit as part of an ecological review on October 29,1994 indicated the vegetation abnormalities appear to be caused from a combination of mechanical disturbance and a fire that occurred in 1985. There are no Hanford records of herbicides being used at this site.

Waste Type: Ordnance

Waste Description:

Bomb fragments are scattered throughout the site, but are concentrated at the site's southeastern corner. No unexploded bombs have been found in the area.

Practice bombs are constructed of thin sheet metal which can be easily bent with manual pressure and appear to be the size of 113.6 kilogram (250 pound) bombs. The items are completely hollow. There are no nose or tail fuses nor evidence of the use of spotting charges in the nose. In some cases, the items collapsed upon impact without fragmenting leaving recognizable tailfins and noses. Also, filler caps were found in the nose which were possibly used to fill the practice bombs with sand or water.

Waste Type: Chemicals

Waste Description:

Description:

Areas with minor vegetation disturbance are scattered throughout the site, but little obvious soil disturbance is evident. The vegetation at the site shows signs of stress and appears to have been

sprayed with a herbicide.

Site Code: 600-46 Classification: Accepted

Site Names: 600-46, Cutup Oil Dump ReClassification: Closed Out (10/16/1995)

Site Type: Dumping Area Start Date:

Site Status: Inactive End Date: 1995

Site At the top of the river bank was a small patch of oil-stained sand with used oil filters by the stain.

By the river shore was an empty can of starting fluid. Just north of the oil stain, at the top of the river bank, was an empty 208-liter (55-gallon) drum. Many pieces of wood were also found

scattered around the site.

EET / NO /1 1

Waste Type: Chemicals

Waste Description:

The site contained used diesel oil filters, an empty can of starting fluid, pieces of lumber, and an empty 208-liter (55-gallon) drum (Summary sentence applies to waste records 1, 2, and 3.). It was the consensus of DOE-RL, EPA, and Ecology that the only potential contaminants involved with past use of the site were total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and possibly lead, cadmium and chromium. Following sampling, only PCBs and TPH were found. Approximately, 10 cubic meters (13 cubic yards) of soil were removed from the site. On August 16, 1995, 84 waste drums containing the PCB-contaminated soil removed from the site were shipped offsite to a waste transfer company for ultimate disposal to a Toxic Substances Control Act landfill.

Waste Type: Barrels/Drums/Buckets/Cans

Waste The site contained one empty 208-liter (55-gallon) drum.

Description:

Waste Type: Misc. Trash and Debris

Waste The site contained wood debris.

Description:

Site Code: 600-47 Classification: Accepted

Site Names: 600-47, Dumping Area North of 300-FF-1 **ReClassification:**

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site This site consists of several areas of debris and Underground Radioactive Material Areas adjacent

Description: to the road extending northward from the 316-5 Process Trenches, north of the 300-FF-1

Operable Unit remediation area.

Waste Type: Misc. Trash and Debris

Waste Description:

Debris found at the site includes concrete, brick, cinder block, glass, stainless steel, steel millings/filings, plastic, tar roofing paper, wire, pipe, bottles, sheet metal, screen, clay pipe, irrigation pipe, etc. Concreted soils were found during test diggings and fine, burned wood was found on top of the rise. A "Danger Area" sign was located on the ground just north of the rise. A photo of the area from 1950 shows soil disturbance in the area.

Site Code: 600-58 Classification: Accepted

Site Names: 600-58, H.J. Ashe Substation Oil/Water **ReClassification:**

Separator & Drywells, BPA SWMU #13

Site Type: French Drain Start Date: 1988

Site Status: Active End Date:

Site The oil/water separator is located south of the fuel island and south of the maintenance

Description: headquarters building. The oil/water separator receives drainage from eight floor drains in the

maintenance headquarters building shop and two drains located on either side of the fuel island. The oil/water separator is designed to remove petroleum, oil, and lubricants from incoming water. It has a 454 liter (120 gallon) capacity. Drainage from the separator as well as drainage from two catch basins south of the maintenance headquarters building, flow into the dry well south of the maintenance building. The oil-water separator is precast concrete with a bottom

elevation of about 4.6 meters (15 feet) below the surface. A site visit on November 20, 1998 found the oil-water separator to be active. It contained water with a small amount of oil sheen floating on the surface.

Waste Type: Oil

Waste The oil/water separator has received petroleum, oil and lubricants.

Description:

Waste Type: Water

Waste The drywells received drainage from the oil/water separator. It is likely that water contained

Description: some petroleum products.

Site Code: 600-59 Classification: Accepted

Site Names: 600-59, H.J. Ashe Substation Storage Area, ReClassification:

BPA SWMU #12, Generator Storage Area

Sump

Site Type: Storage Start Date: 1976

Site Status: Active End Date:

Site The storage facility is southwest of the maintenance headquarters building. The 6.1 meter (20 **Description:** foot) by 4.6 meter (15 foot) generator storage area inside the Hazardous Waste Storage portion of

the building has a double floor. The top flooring consists of a metal grate. The sub-floor is concrete with no outlet, that acts as a containment basin to catch any spill or release that might occur. The concrete sub-floor is sloped. The low end is considered to be a sump. The sump has no outlet. The building is actively being used by the Bonneville Power Administration (BPA) for

storage of waste drums.

Waste Type: Chemicals

Waste Annual hazardous waste reports indicate that the following wastes are generated at the Ashe **Description:** Substation, 1,1,1-Trichloroethane mixture, 1,1,1-Trichloroethane-contaminated soils, acetone

Substation, 1,1,1-Trichloroethane mixture, 1,1,1-Trichloroethane-contaminated soils, acetone waste mixture, spent photgraphic fluids, fixer, and developer, battery acid and fluid mixture,

ferric chloride etching solution waste, methanol waste mixture (Karl Fisher reagent), pentachlorophenol and sodium pentachlorophenol, solvent compound-thinner waste, toluene-

isopropanol with potassium hydroxide (titrating solution).

All waste is taken to the generator storage area (SWMU #12). This unit is part of the Flammable, Herbicide, and Toxic Waste Storage Facility Building located southwest of the maintenance headquarters building. Hazardous wastes from maintenance activities at other

substations are collected at this location.

Site Code: 600-60 Classification: Accepted

Site Names: 600-60, H.J. Ashe Substation Switchyard **ReClassification:**

Facility

Site Type: Electrical Substation Start Date: 1976

Site Status: Active End Date:

Site The H.J. Ashe Substation is an active, operating electrical switchyard facility. The H.J. Ashe **Description:** Substation consists of two large structures, a control house and a maintenance building, and yard

areas with smaller buildings used for dry chemical storage and a vehicle fuel station with two underground gasoline tanks. The substation was first energized on December 3, 1976. Structures and equipment include an oil-filled circuit breaker {28, 766 liters (7,600 gallons)}, two underground gasoline tanks {15,140 liters (4,000 gallons) each}, four mineral oil storage tanks {18,925 liters (5,000 gallons)}, hazardous waste, flammable materials, and herbicide storage building {455 kilograms (1,000 pounds)}.

Waste Type: Chemicals

Waste Description:

Annual hazardous waste reports indicate that the following wastes are generated at the Ashe Substation, 1,1,1-Trichloroethane mixture, 1,1,1-Trichloroethane-contaminated soils, acetone waste mixture, spent photographic fluids, fixer, and developer, battery acid and fluid mixture, ferric chloride etching solution waste, methanol waste mixture (Karl Fisher reagent), pentachlorophenol and sodium pentachlorophenol, solvent compound-thinner waste, toluene-isopropanol with potassium hydroxide (titrating solution). Polychlorinated biphenyls (PCBs) are also a potential contaminant of concern at this site because of the releases of insulating oil (See Releases Section).

Site Code: 600-62 Classification: Accepted

Site Names: 600-62, Benton Switch Substation Releases **ReClassification:**

Site Type: Unplanned Release Start Date: 1948

Site Status: Active End Date:

Site Description:

The substation is currently active and is enclosed in a locked, chain link fenced area. It began operations on November 11, 1948. The site contains various electrical equipment, circuit breakers, transformers, tanks, and support facilities. The primary environmental concern stems from leaking insulating oil from transformers and circuit breakers. A site visit on November 20, 1998, observed several areas of discolored gravel and stained concrete beneath vessel valves.

Waste Type: Oil

Waste Description:

The waste is soil potentially contaminated with polychlorinated biphenyls (PCBs) (Arochlors 1254 and 1260), insulating oil (10-weight petroleum oil with 0.1% 2,6-di-tertbutyl-paracresol). Mineral oil containing PCBs and solvents are the hazardous constituents used at the site.

Site Code: 600-63 Classification: Accepted

Site Names: 600-63, 300-N Lysimeter Area, Recharge **ReClassification:**

Study Site, Buried Waste Test Facility, Vadose Zone Field Study - 300 North,

VZFS300N

Site Type:LaboratoryStart Date:1984Site Status:ActiveEnd Date:1994

Site The site is enclosed within a chain link fence with barbed wire top and a locked gate. The fenced area is posted with "Restricted Area - Contact PNL Radiological Office" and "Underground"

Radioactive Material" signs. Outside the fence there is a considerable amount of debris. Two

large wooden cabinets, pallets, piping and a fire extinguisher were noted.

Waste Type: Soil

Waste **Description:** A trace amount of Co-60 was mixed in one centimeter of soil and placed 60 centimeters below the surface of two of the drainage lysimeters. Trace amounts of tritium were placed in two other

lysimeters. The migration of the contaminants was monitored.

Site Code: 600-64 **Classification:** Rejected (2/12/1999)

Site Names:

600-64, Underground Sanitary Sewer Line from 400 Area to WPPSS, Sanitary Waste

ReClassification:

Tie-Line from the 400 Area to WPPSS

Site Type: Sanitary Sewer

1997 **Start Date:**

Active **Site Status:**

End Date:

Site **Description:** This underground, gravity flow line begins at the inlet to the 4607 Sanitary Sewer septic tanks and connects the 400 Area sanitary sewer main (also known as the 4903 Sanitary Sewer Main) with the Washington Public Power Supply System sewage treatment facility. The sewer line route appears as a disturbed area covered with sand and little vegetation. Washington Public Power Supply System signs posted along the route mark the existence of an underground sewer line.

Waste Type:

Sanitary Sewage

Waste **Description:** Site personnel report that a small amount of sanitary wastes was unintentionally discharged into the tie-line (and, thus, the WPPSS sewage treatment facility), prior to reaching agreement with WPPSS in late 1992. The sanitary wastes remained with the underground tie-line and the treatment facility. No wastes were released to the environment. Radiation detection systems in the treatment facility indicated the presence of radioactive cobalt, cesium, and tritium beyond set limits. However, only tritium was confirmed to have been present in the sanitary wastes from the 400 Area. Water from 400 Area wells contains elevated levels of tritium, which may explain the presence of tritium in sanitary wastes.

Site Code: 600-96

Classification: Rejected (10/7/1998)

600-96, 618-10 Borrow Pit **Site Names:**

ReClassification:

Site Type: Depression/Pit (nonspecific) **Start Date:**

Site Status: Inactive **End Date:**

Description:

Site

The site is sandy and mostly unvegetated. The site has been scraped for material to cover the adjacent burial ground. No waste was observed in the area in 1995, except for a large pile of tumbleweeds that were removed from the fence surrounding the 618-10 Burial Ground.

Waste Type: Vegetation

Waste

A large pile of tumbleweeds was observed.

Description:

Site Code: 600-97 **Classification:** Rejected (10/7/1998)

600-97, 618-11 Borrow Pit **Site Names:**

Depression/Pit (nonspecific)

ReClassification:

Site Type:

Start Date:

Site Status: Inactive **End Date:**

Site The site is located in a slight depression where 0.3 to 0.6 meters (1 to 2 feet) of soil has been

Description: removed to cover the 618-11 Burial Ground.

Site Code: 600-117 Classification: Accepted

Site Names: 600-117, 300 Area Treated Effluent **ReClassification:**

Disposal Facility (TEDF), 310 Building

Site Type: Process Unit/Plant Start Date: 1994

Site Status: Active End Date:

Site The site includes the main treatment building (310 Building) which is about 27.4 meters (90 feet)

Description: wide, 45.7 meters (150 feet) long, 6.7 meters (22 feet) high, and metal in construction; three

modular/mobile offices (MO443, MO744, MO745); two exterior Diversion Tanks (19 meters [62 feet] in diameter each); one exterior Equalization Tank (13.7 meters [45 feet] in diameter); two exterior Clarifier Tanks (9.1 meters [30 feet] in diameter each); two drum storage areas; one

chemical storage area; all units are surrounded by a chain link fence.

Waste Type: Process Effluent

Waste The 300 Area process sewer discharges via the TEDF Sump to the 300 Area TEDF. The wastes

Description: discharged to the process sewer is composed of metals, organics, and cyanide. The maximum

flow rate the facility is design to accommodate is 1,200 liters per minute (300 gallons per minute). The expected flow rate is approximately 600 liters per minute (150 gallons per minute).

SubSites:

SubSite Code: 600-117:1

SubSite Name: 600-117:1, 300 TEDF Sump, Waste Collection Sump 1

Classification: Accepted

ReClassification:

Description: Wastewater from the 300 Area process sewer is collected in a 182-centimeter (72-inch)

diameter diversion manhole located just west of Waste Collection Sump 1 via a 41-centimeter (16-inch) ductile iron pipe. A basket strainer on the end of the pipe screens out large objects, protecting the three large pumps. These pumps transfer wastewater to the 300 TEDF through a 25.4 centimeter (10-inch) high-density polyethylene pipe. The transfer pipe terminates

inside the 300 TEDF facility at the equalization pipe.

Site Code: 600-155 Classification: Rejected (1/27/1999)

Site Names: 600-155, Dumping Area Upstream of River **ReClassification:**

Mile Marker 35 Identified During RCRA General Inspection #HIRIV-FY96 Item #7

Site Type: Dumping Area Start Date:
Site Status: Inactive End Date:

Site The site consists of an old rusty machine part with approximate dimensions of 1.8 meters by 1.2

Description: meters by 0.6 meters (6 feet x 4 feet x 2 feet). The part is marked with a small metal tag "USA-

HEW 355464/ Property of US Government." The surrounding soil is silty sand and cobbles, with moderate cheatgrass and bunchgrass vegetation. Nearby flood debris consists of tree branches and small logs. There are no other large pieces of metal or construction type material. The

surface of the access road is sand and gravel.

During visits to the site on February 1, 1999, and February 3, 1999, other debris was observed. This debris included: a chunk of concrete, an old muffler, a piece of metal that looked as though it could have come from the piece of machinery, other metal debris, a tire and wood debris (not flood debris). This miscellaneous debris is primarily south of the piece of machinery and most is within 100 meters (328.1 feet).

A field visit on July 19, 1999, verified that the large piece of equipment had been removed. A small piece of metal (approximately 0.46 meters (18 inches) in length) remained half buried in the soil.

Waste Type: Equipment

Waste The waste is steel scrap. The metal tag contains "USA-HEW-355464". "HEW" stands for **Description:** Hanford Engineering Works which was the name used during the era of reactor construction.

Therefore, the material is not pre-Hanford historic waste.

Site Code: 600-210 Classification: Rejected (1/15/1999)

Site Names: 600-210, 300 Area TEDF Outfall ReClassification:

Site Type: Outfall Start Date: 1994

Site Status: Active End Date:

Site Description:

The outfall line is a 25-centimeter (10-inch) polyvinyl chloride (PVC) pipeline that is routed to the shore of the Columbia River (approximately 600 meters [2000 feet] from the TEDF. To protect an archaeological site near the river, the pipeline is routed aboveground until it is close to the shoreline. At this point, the pipe is routed below grade into a gravel-filled, rock-armored trench. At the shoreline the PVC pipe is transitioned to an 20 centimeter (8-inch) ductile iron pipe that transfers the effluents to the mid-channel single-point diffuser.

The diffuser lies on the bottom of the channel, and consists of an iron pipe routed through a large, rectangular concrete casing. An angled discharge-pipe bolts directly to the concrete block.

Waste Type: Process Effluent

Waste The outfall discharges effluent from the 300 Area TEDF.

Description:

Site Code: 600-243 Classification: Accepted

Site Names: 600-243, Petroleum Contaminated Soil **ReClassification:**

Bioremediation Pad, Bioremediation Pad inside Gravel Pit #6, Pit 6, Oil

Contaminated Soil

Contaminated Son

Site Type:Surface ImpoundmentStart Date:Site Status:InactiveEnd Date:

Site The site is a treatment facility for petroleum contaminated soil. It is rectangular shaped, 48.5

Description: meters (159 feet) long by 38.7 meters (127 feet) wide. A 0.9 meters (3 foot) berm surrounds the site. The site is lined with heavy black plastic. The contaminated soil has visible rust stains and pieces of clear plastic mixed into the soil. Tumbleweeds and cheatgrass are growing on the surface. No petroleum odors were observed at the site. The site is posted "Keep Out Petroleum

Contaminated Soil For Entry Contact 376-7053."

Waste Type: Soil

The waste is petroleum contaminated soil from Project LO-44, Underground Storage Tank Waste

Description: Removals.

600-244 **Classification:** Rejected (1/27/1999) **Site Code:**

Site Names: 600-244, Gravel Pit #6, Pit 6 **ReClassification:**

Start Date: Site Type: Depression/Pit (nonspecific) **End Date: Site Status:** Active

Site **Description:** The pit is a source for gravel used for bedding and backfill material. A gravel road leads into a large irregular shaped pit area. The physical boundaries of the site are larger than the area where gravel is currently being excavated. The four corners of the pit's largest extents are marked with posts (railroad ties installed vertically). Stock piles of gravel and excavation equipment are present, indicating active gravel pit operations. A chain link fenced equipment storage area is located in the northwest corner of the Pit #6 property.

Site Code: 600-245 **Classification:** Rejected (1/27/1999)

600-245, Gravel Pit #8, Pit 8 **ReClassification: Site Names:**

Depression/Pit (nonspecific) **Start Date:** Site Type: **Site Status:** Active **End Date:**

The gravel pit is an irregular shaped depression. No waste of any kind was found in the pit. Site

Description:

Site Code: 600-246 **Classification:** Accepted

Site Names: 600-246, Gravel Pit #9, Inert/Demolition **ReClassification:** Rejected (1/27/1999)

Waste Landfill, Pit 9

Burial Ground Site Type: Start Date: Active **End Date: Site Status:**

Site Gravel Pit #9 is a large depression where gravel has been extracted. The gravel pit is now used as an inert landfill for nondangerous/nonradioactive wastes. A bio-remediation pad (WIDS sitecode **Description:**

600-287) is located in the east section of the pit. The bio-remediation pad was posted is a Soil

Contamination Area.

Demolition and Inert Waste Waste Type:

Waste The waste includes concrete, wood and asphalt. Soil was removed from around the 384 fuel oil

day tanks and placed in Pit 9 in 1999. Soil sample results showed a plutonium spike, so the bio-**Description:**

remediation pad was posted as a Soil Contamination Area.

Site Code: 600-247 **Classification:** Accepted

Site Names: 600-247, Gravel Pit #10, Inert Landfill, Pit **ReClassification:** Rejected (1/27/1999)

Site Type: Burial Ground Start Date: Site Status: Inactive End Date:

Site The site is an old gravel pit. Once extraction operations were completed, the site was then used as

Description: a solid waste landfill for inert and demolition waste. Gravel Pit #10 has been closed and

backfilled to grade. The site perimeter is marked with posts and chain.

Waste Type: Demolition and Inert Waste

Waste The gravel pit is an approved inert landfill. Waste includes wood, concrete and asphalt.

Description:

Site Code: 600-248 Classification: Rejected (1/27/1999)

Site Names: 600-248. Gravel Pit #11, Pit 11 **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Active End Date:

Site Gravel Pit #11 is a large, rocky excavated area north of the WYE Barricade. It is actively being

Description: used as a source of gravel for backfill.

Site Code: 600-249 Classification: Accepted

Site Names: 600-249, Debris Within Gravel Pit 6 **ReClassification:** Rejected (4/6/1999)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is areas of dumped material located within Gravel Pit #6. There are spoil piles of

Description: material excavated during the construction of the Environmental Molecular Sciences Laboratory

(EMSL) facility that are located in the northwest section of the Gravel Pit #6 property boundaries. Miscellaneous debris can be seen in scattered piles and protruding from the soil.

Waste Type: Misc. Trash and Debris

Waste The site contains miscellaneous debris and ash pit sludge. Visible debris includes metal pipes, **Description:** PVC pipes, concrete and tires. (The tires and some other debris were removed in 1999 for

proper disposal) Periodically, damp ash was trucked from the 300 Area Ash Pits (WIDS Site 300 ASH PITS) and placed in Pit #6. Eventually, the area reserved for the ash became filled. The area was covered with dirt. This is the same area where a bioremediation pad was located

(WIDS Site 600-243).

Site Code: 600-255 Classification: Rejected (5/26/1999)

Site Names: 600-255, 300 Area Stormwater Percolation **ReClassification:**

Pond

Site Type: Pond Start Date: 1980

Site Status: Active End Date:

Site The site is a very large, unlined basin. It has a gravel bottom and coble covered sloped sides.

Description: There are two effluent pipes protruding from the east wall of the basin. Using the contour patterns

on Arcview, it was determined the site is approximately 90 meters (295 feet) long and 30 meters

(98 feet) wide.

Waste Type: Stormwater Runoff

Waste The site receives stormwater runoff from the northwest section of the 300 Area.

Description:

Site Code: 600-259 Classification: Accepted

Site Names: 600-259, Inactive Lysimeter Site East End, ReClassification:

Special Waste Form Lysimeter, Grout

Waste Test Lysimeter

Site Type:LaboratoryStart Date:1984Site Status:InactiveEnd Date:1994

Site Description:

The site is currently inside a 2.4 meter (8 foot) high chain link fence. The inactive eastern portion is separated from the active western portion by a section of 2.4 meter (8 foot) high chain link fence that was added in 1999. The inactive portion is located on the east end of the original site (600-63) and includes the Special Waste Form lysimeter and the Grout Waste Test Facility (exhumed). The Special Waste Form Lysimeter is visible. It consists of a buried, circular center instrument caisson structure surrounded by an array of ten cylindrical buried lysimeters. The tops of the lysimeters are covered with metal lids. The top of the instrument caisson is posted with a Radioactive Material/Radiologically Controlled Area sign. The Grout Waste Test Facility lysimeter had been located in the east end of the inactive portion of the lysimeter site. When it was exhumed, the fence was modified to exclude the exhumed lysimeter. The exhumed lysimeter is not marked or posted.

Waste Type: Soil

Waste Description:

The Grout Waste Lysimeter caissons (A-1 and B-1) contained layers of waste, containing small amounts of both radioactive and non-radioactive tracer agents embedded into grout material. The waste layers were separated by layers of soil. The lysimeter caissons were buried below ground. The radioactive tracers used in this test were primarily Co-60 (up to 330 Ci/L) and lesser amounts of Cobalt-58, Iron-59, Chromium-51 and Manganese-54.

Waste Type: Soil

Waste Description:

The Special Waste Form lysimeter contained masonry cement, portland cement and vinyl ester styrene waste forms spiked with Mn-54, Co-60, Cs-134 and Cs-137. The waste forms were placed into the lysimeters at various depths. The leachate was collected and disposed of. The research was completed in 1992. The lysimeters were capped in 1995 to prevent any further water intrusion. The leachate was drained for the last time by PNNL in 1996.

SubSites:

SubSite Code: 600-259:1

SubSite Name: 600-259:1, Grout Lysimeter Site, Grout Waste Test Facility

Classification: Accepted

ReClassification:

Description: The Grout Waste Test Facility consisted of four large lysimeters designed to test the leaching

and migration rates of grout solidified low level radioactive waste. The lysimeters were installed in 1985. Each lysimeter (caisson) was 2 meters (6.4 feet) in diameter, 8 meters (25.6 feet) deep with a closed bottom. The four caissons were placed vertically in the ground, forming a square. The four lysimeters were designated as A1, A2, B1 and B2. A2 and B2

were never used. Lysimeter A1 contained phosphate/sulfate waste and B1 contained Cladding Removal Waste. Twenty four radioactive waste forms were placed on each lysimeter. The waste forms were placed in layers, separated by soil and gravel. Routine monitoring and leachate collection activities were conducted until January 1989. The lysimeters were exhumed in September 1994.

Site Code: 600-265 Classification: Rejected (3/8/2001)

Site Names: 600-265, Unidentified Pipes Near the 618- **ReClassification:**

10 Burial Ground

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Inactive End Date:

Site The site is two, 5 centimeter (2 inch) diameter, stainless steel pipes protruding approximately 10

Description: centimeters (4 inches) from the ground. The pipes are approximately 1.5 meters (5 feet) apart. Each stainless steel pipe has a rusted pipe inserted in the center that extend approximately 0.6

meters (2 feet) above ground.

The Site Was Consolidated With:

Site Code: 618-10

Site Names: 618-10, 300 North Solid Waste Burial Ground, 318-10

Reason: Within Remediation Layback Area

Site Code: 600-276 Classification: Rejected (4/1/2002)

Site Names: 600-276, Hanford Geotechnical ReClassification:

Engineering and Development Facility, GEDF, Cold Test Facility, Little Egypt

Site Type: Laboratory Start Date: 1982

Site Status: Inactive End Date:

SiteThe site is surrounded with light posts and chain. A vehicle gate is posted "Authorized Personnel **Description:**Only". The site is a large open field with a high mound of soil in the center. Several pipes extend

Only". The site is a large open field with a high mound of soil in the center. Several pipes extend vertically through the surface of the soil in some areas. A small pallet containing damaged bags

of bentonite is located in the southeast corner of the area adjacent to some vertical pipes. Two steel hinged plates cover access holes to underground culverts used as monitoring stations for

buried waste tests.

Waste Type: Equipment

Waste Only simulated buried waste was placed into this test site.

Description:

Site Code: 600-278 Classification: Discovery

Site Names: 600-278, Bioremediation Pad Within **ReClassification:**

Gravel Pit 9, Oil Contaminated Soil

Site Type: Surface Impoundment Start Date: 1999

Site Status: Active End Date:

Site The bioremediation area is located in the eastern section of Gravel Pit #9.

Description:

Waste Type: Oil

Waste The soil on the bio remediation pad was originally contaminated with petroleum (fuel oil #6 and

Description: diesel oil #2) from the excavation of the 384 Day Tanks (sitecode 300-223).

Site Code: 618-1 Classification: Accepted

Site Names: 618-1, Solid Waste Burial Ground No. 1, **ReClassification:**

318-1

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1951

Site Description:

The Burial Ground consists of at least two trenches running north-south, that measure 5 meters (16 feet) wide by 61 meters (200 feet) long and are 2.4 meters (8 feet) deep. The south end of the burial ground contains a series of pits that are estimated to be 6.1 meters (20 feet) deep and possibly two shorter, east-west trenches. Most of the burial ground is marked with yellow, concrete AC-540 markers and radiation area chain. There are five other "Buried Radioactive Material" medallions inserted flush with the asphalt pavement along the east side of the 333 Building to mark the western extent of the burial ground. The 303-M Building was built over a portion of the original burial ground. In 1998, the burial ground was located within a larger area posted as a Contamination Area.

This site has two subsites, 618-1:1, the 333 ESHTSSA (333 East Side Heat Treat Salt Storage Area), and 618-1:2, the Limestone Neutralization Pit, WATS Trench Neutralization Pit. Other sites have been consolidated into it: UPR-300-13, the Acid Neutralization Tank Leak East of the 333 Building; UPR-300-14, the Acid Leak at the 334 Tank Farm; and 333 LHWSA, the 333 Laydown Hazardous Waste Storage Area.

Waste Type: Misc. Trash and Debris

Waste Description:

The site contains large quantities of uranium (~16 tons [14,500 kilograms]) from the fuel fabrication activities and small quantities of plutonium and fission products from laboratory operations. Specific items include contaminated gloves, miscellaneous equipment, bronze crucibles, and solid laboratory waste.

A 1946 report states that lead sink traps from the 321 laboratory were removed and taken to the burial ground. Radiological readings indicated 6,000 d/m alpha and 15 mr/hr beta/gamma. A monthly report from August 1946 mentions the burial of a bronze crucible that read 170 millireps/hour (179 millirads/hour) and 5.5 mr/hr (probably millirads/hour) at 10.2 centimeters (4 inches).

Waste Type: Chemical Release

Waste Description:

Additional waste from unplanned releases (WIDS Site UPR-300-13) from facilities that were constructed over the burial ground would have contributed additional chemicals to the soil column as a liquid release. Sample results showed that 2015 kilograms (4432 pounds) of nitric acid, 44 kilograms (96 pounds) of fluoride, 217 kilograms (477 pounds) of copper and 1.4 kilograms (3 pounds) equivalent to 0.0005 curies of uranium were lost to the ground. 870 kilograms (1910 pounds) of caustic was added to the leaking tank and allowed to leak into the soil to neutralize the acid that had escaped into the ground. The leak rate of the tank was 582.9 liters (154 gallons) per hour.

A release on July 18, 1975 (WIDS Site UPR-300-14) of 4,540 liters (1,200 gallons) of 93% sulfuric acid solution from the 334 Tank Farm drained to a limestone pit (WIDS Site 300-246). Since the pit had an open bottom and was located over the 618-1 Burial Ground, the release drained to the burial ground.

Waste Type: Chemicals

Waste WIDS Site 333 ESHTSSA stored containers of solidified heat-treat salt waste from the fuels **Description:** fabrication facility. The waste consisted of sodium chloride, potassium chloride, sodium nitrite,

sodium nitrate, and potassium nitrate. Approximately, thirty to fifty 208 liter (55 gallon) drums

accumulated each year (1964-1987).

SubSites:

SubSite Code: 618-1:1

SubSite Name: 618-1:1, 333 ESHTSSA, 333 East Side Heat Treat Salt Storage Area

Classification: Accepted

ReClassification:

Description: The 333 ESHTSSA is an inactive storage area. The unit included various locations inside the

333 Building fence where heat-treat salts were stored. The heat-treat salts were stored on the paved area near the southeast corner of the building or in the adjacent area located over a

portion of the 618-1 Burial Ground.

Several areas of the asphalt pavement have been painted over and posted fixed radiological

contamination (WIDS Site UPR-300-17).

The unit stored containers of solidified heat-treat salt waste from the fuels fabrication facility. The waste consisted of sodium chloride, potassium chloride, sodium nitrite, sodium nitrate, and potassium nitrate. Approximately, thirty to fifty 208 liter (55 gallon) drums accumulated

each year (1964-1987).

SubSite Code: 618-1:2

SubSite Name: 618-1:2, Limestone Neutralization Pit, WATS Trench Neutralization Pit

Classification: Accepted

ReClassification:

Description: The west side of the Limestone Neutralization Pit is 25.6 meters (84 feet) east of the 333

Building east wall. The centerline of the Pit is 26.8 meters (88 feet) south of the centerline of the 333 Building East Pipe Trench (where the pipe trench exits the east wall of the 333

Building). (see H-3-18520).

The upper wooden covers for the Limestone Neutralization Pit have been removed, the pit has been backfilled with soil. It is no longer visible at the surface. The concrete pipe trench branch to the pit is visible (see photos). The drain line from the concrete pipe trench to the pit was sealed and the neutralization pit shut down in 1975 following a large acid spill (WIDS

Site UPR-300-14). This incident caused concern for the groundwater.

The original pit contained a 0.46 meter (1.5 foot) deep bed of limestone with 7.6 centimeter (3 inch) rock maximum on top of a 0.3 meter (1 foot) deep bed of washed gravel 7.1 centimeter (2 inch) rock maximum. The top of the limestone bed was 15.2 centimeters (6 inches) above grade and 1.2 meters (4 feet) above the surface of the limestone bed.

The Limestone Neutralization Pit received drainage from the WATS pipe trench and the 334 Tank Farm sump trench which is connected to the pipe trench. The pit was filled with limestone rocks used to neutralize acidic aqueous solutions draining from the pipe trench. The pit had an open top to allow the addition of limestone rocks as needed. It was open at the bottom to drain to the soil column of Burial Ground No. 1 (618-1) located beneath the pit. The typical design used for limestone pits and tanks included an open top covered by railroad ties which could be removed to allow dumping limestone rock directly into the pit and onto the adjacent surfaces for future additions with a shovel. The 334 Tank Farm had four elevated tanks, two for storing concentrated nitric acid (Tanks 1 and 2), one to store concentrated sulfuric acid (Tank 3), and one tank (Tank 4) which was used from about 1971 to 1986 to store waste etch acid. A sump trench beneath the elevated acid tanks collected leaks from tanks, valves, and piping. The acid transfer lines from the 334 Tank Farm to the 333 Building were installed in the Pipe Trench. Rainwater collected in the sump trenches and the pipe trench drained to the pit.

The Following Sites Were Consolidated With This Site:

Site Code: 333 ESHTSSA

Site Names: 333 ESHTSSA, 333 East Side Heat Treat Salt Storage Area

Reason: Within Boundary Of Larger Site

Site Code: 333 LHWSA

Site Names: 333 LHWSA, 333 Laydown HWSA, 333 Laydown Hazardous Waste Storage Area

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-13

Site Names: UPR-300-13, UN-300-13, Acid Neutralization Tank Leak East of 333 Building

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-14

Site Names: UPR-300-14, UN-300-14, Acid Leak at 334 Tank Farm

Reason: Within Boundary Of Larger Site

Site Code: 618-2 Classification: Accepted

Site Names: 618-2, Solid Waste Burial Ground No. 2, **ReClassification:**

318-2

Site Type:Burial GroundStart Date:1951Site Status:InactiveEnd Date:1954

Site The area is fenced and posted as Underground Radioactive Material. The unit contains three or **Description:** four trenches running east-west. A 1995 Ground Penetrating Radar survey shows the northern

most trench to be 49 meters (160 feet) long and 9 meters (30 feet) wide. The southern most trench is 55 meters (180 feet) long and 15 meters (50 feet) wide. The center trench is 54 meters (175 feet) long and 18 meters (60 feet) wide. The discrepancy of whether there are three or four trenches could be due to the fact that the geometry of the middle trench is broken into two pieces

at the east end.

Waste Tyne: Equipment

Truste 1,per Equipment

Waste Description:

The unit was used for disposal of uranium-contaminated equipment and materials, plutonium, and fission products. The uranium waste was typically solid metallic uranium oxides in the form of metal cuttings from Reactor Fuel Fabrication facilities in the 300 Area. The plutonium and fission products came from 300 Area laboratory facilities, that began to operate in 1953. The burial ground may also contain tin from the triple dip canning process and lead from the lead dip process.

Site Code: 618-3 Classification: Accepted

Site Names: 618-3, Solid Waste Burial Ground No. 3, **ReClassification:**

318-3, Burial Ground #3, Dry Waste Burial

Ground No. 3

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1955

Site Description:

The site is fenced and posted with Underground Radioactive Material signs. The original surface dimensions were 107 meters (350 feet) long by 50 meters (165 feet) wide. An extension to the north end of the burial ground appears on Drawings H-6-933 and H-6-939, lengthening the site by 15 meters (50 feet).

A 1995 Ground Penetrating Radar survey indicates this burial ground is dominated by one continuous north-south trending trench. Within the interpreted trench boundary, areas of debris are readily identified continuously covering an area of about 335 ft by 90 ft.

Waste Type: Demolition and Inert Waste

Waste Description:

The site consists of uranium-contaminated waste, primarily building materials from the remodeling of the 313 Building. It may also contain waste from the 303-J and K upgrades. In 1986, the volume of contaminated soil was estimated to be 12,549 cubic meters (443,160 cubic feet), with 12,643 cubic meters (446,480 cubic feet) of overburden.

Site Code: 618-5 Classification: Accepted

Site Names: 618-5, Burial Ground No. 5, Regulated **ReClassification:**

Burning Ground, 318-5

Site Type:Burial GroundStart Date:1945Site Status:InactiveEnd Date:1962

Site A remediation activity began in 2001. Prior to remediation, the burial ground had two fences.

Description: The outer fence was posted with Underground Radioactive Material. The inner fence was posted

with Soil Contamination signs.

Waste Type: Misc. Trash and Debris

Waste HW-39076 states the area was a burning trench as well as a storage area for aluminum silicate **Description:** containing 17% uranium and bronze crucibles with radiation levels up to 200 mr/hr. The site

containing 17% uranium and bronze crucibles with radiation levels up to 200 mr/hr. The site was used for the disposal of uranium-bearing trash. Characterization test pits dug in 1992 encountered radiologically contaminated lead bricks, steel pipes, wood fragments and other

garbage. Asbestos was found in Test Pit 2.

Site Code: 618-6 Classification: Accepted

Site Names: 618-6, Solid Waste Burial Ground #6 ReClassification: Rejected (10/7/1998)

Site Type:Burial GroundStart Date:1943Site Status:InactiveEnd Date:1944

Site The 618-6 Burial Ground was originally located in the southeast corner of 300 Area near where

Description: the 325 Building is currently located. The waste was exhumed and relocated twice to allow for 300 Area construction expansions. In 1962, the contents were permanently moved to the 618-10

Burial Ground.

Waste Type: Equipment

Waste The unit contained solid uranium waste.

Description:

Site Code: 618-7 Classification: Accepted

Site Names: 618-7, Solid Waste Burial Ground No. 7, **ReClassification:**

Burial Ground #7, 318-7

Site Type:Burial GroundStart Date:1960Site Status:InactiveEnd Date:1973

Site Description:

The burial ground consists of 2 east-west oriented trenches and one "V-shaped" pit. The burial ground is a vegetation-covered area, with patches of cobbles, surrounded by wooden poles and an 2.4-meter (8-foot) wire fence. A locked gate is located on the east side of the fenced area and is posted with Underground Radioactive Material signs.

Results from the 1995 Geophysical Investigation provide further detailed information: The most southern trench, because of its V-shaped geometry, is most likely the V-shaped trench referred to in DeFord et al. (1994). The dimensions of this trench are roughly 30 ft wide across the top and 450 ft long. The thickness of fill overlying the buried waste varies from 2 to 9 ft (0.6 to 2.7 meters).

The middle trench has four square cement monuments that were apparently used to mark its south and north boundaries. This trench is the only trench that has such markers. The trench is approximately 100 ft wide and 520 ft long. It contains high concentrations of buried waste throughout. The thickness of fill overlying the buried waste varies from 2 to 9 ft.

The most northern trench is very similar in character to the middle trench. It is roughly 90 ft wide and 530 ft long, and also has high concentrations of buried debris throughout. The thickness of fill overlying the buried waste varies from 2 to 9 ft.

Waste Type: Equipment

Waste Description:

Materials buried at this site were primarily from the 321, 313, 333, 3722 and 3732 Buildings. Miscellaneous contaminated equipment and hundreds of 114 liter (30 gallon) drums of zircaloy chips contaminated with moderate amounts of beryllium and uranium were buried in the trenches from 1960 to 1973. Since the zircaloy was considered pyrophoric, the drums were filled with water to avoid spontaneous combustion. It is highly possible the water has leaked out of the drums. It has been suggested the waste remain undisturbed to avoid oxidation. An explosive hazard may be present. Other low-level material, slightly contaminated with uranium and thorium, was also buried in the trenches. A 1972 memo states that from January through August 1972 91 cubic meters (3024 cubic feet) of waste contaminated with uranium was placed in

Burial Ground 7. It also states that during that same period, 55 cubic meters (1848 cubic feet) of thoria contaminated waste, 25 cubic meters (848 cubic feet) of thorium oxide and 30 cubic meters (1000 cubic feet) of non-radioactive beryllium contaminated waste was placed in Burial Ground 7.

Site Code: 618-8 Classification: Accepted

Site Names: 618-8, Solid Waste Burial Ground No. 8, **ReClassification:**

318-8, Early Solid Waste Burial Ground

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1954

Site A parking lot was constructed over the majority of the site. Subsequently, the radiation

Description: monuments were cut down to grade. Medallions embedded in the asphalt mark the location of the

burial ground. The original footprint of the burial ground was expanded to the north in 1980. This area is delineated by post and chain. The site is posted as Underground Radioactive Material. Ground Penetrating Radar (GPR) investigations have not identified a traditional trench

configuration.

Waste Type: Construction Debris

Waste The site is assumed to have been used for the disposal of uranium-contaminated solid waste

Description: from fuel fabrication facilities.

Site Code: 618-9 Classification: Accepted

Site Names: 618-9, 300 West Burial Ground, 318-9, Dry ReClassification: Closed Out (10/7/1998)

Waste Burial Site No. 9

Site Type:Burial GroundStart Date:1950Site Status:InactiveEnd Date:1956

The site was a burial ground composed of a single trench and enclosed within a fence measuring **Description:** 105 by 95 meters (344 by 312 feet). The waste site was exhumed during an Expedited Response

action in 1991-1992. The empty trench was backfilled and revegetated. The site was released

from Radiological Control and the fence was removed.

Waste Type: Chemicals

Waste Historical reports indicated 6,000 kilograms (13,200 pounds) of tributyl phosphate, 10,000 **Description:** kilograms (22,000 pounds) of paraffin hydrocarbon, and 19,000 liters (5,000 gallons) of

uranium-contaminated organic solvents were disposed of in the burial trench. In 1991,this burial ground was excavated. Approximately 2,600 liters (700 gallons) of methyl isobutyl ketone, aka hexone, and 3,400 liters (900 gallons) of kerosene solvent were recovered from 120 drums in the trench's western end. The kerosene solvent was normal paraffin hydrocarbon and tributyl

phosphate, known as NPH/TBP. Severely corroded drums were also found at the eastern end of the trench. Approximately 39.6 cubic meters (1,400 cubic feet) of debris was also found, including more than 80 empty drums, a wheelbarrow, scrap process equipment, construction debris, two breached bags of ammonium nitrate, unidentified white powders, and several lead bricks. Debris and soil were removed to the 200 Area Low-level Radioactive Burial Ground.

Liquid wastes were sent to licensed off site waste handling facilities.

Site Code: 618-10 Classification: Accepted

Site Names: 618-10, 300 North Solid Waste Burial ReClassification:

Ground, 318-10

Site Type:Burial GroundStart Date:1954Site Status:InactiveEnd Date:1963

The site consists of 12 trenches and 94 vertical pipe units. The trenches range in size from 97 meters (320 feet) long by 21 meters (70 feet) wide, 7.6 meters (25 feet) deep to 15 meters (50

feet) long by 12 meters (40 feet) wide, 7.6 meters (25 feet) deep. The vertical pipe units are 56 centimeter (22 inch) diameter, 4.6 meter (15 feet) long waste receptacles constructed by welding five 55-gal (208 L) bottomless drums together. The column of drums were buried vertically. When they reached their waste capacity level, they were backfilled and topped with concrete. The site perimeter is fenced and marked with concrete AC-540 Markers numbered 3-64-1 through 3-64-68. The site has been surface stabilized and vegetated with grasses. The site is posted with

Underground Radioactive Material signs.

Waste Type: Equipment

Waste The site contains a broad spectrum of low- to high-level dry wastes, primarily fission products **Description:** and some transuranic (TRU) from the 300 Area. Low-level wastes are buried in trenches, and

medium- to high-level beta/gamma wastes are mostly in the vertical pipe units. Some higher activity wastes were placed in concrete shielded drums and disposed in the trenches. Following a Plutonium Nitrate spill in the 305-B Building (3-3-61) miscellaneous contaminated debris was taken to the 300 North Burial Ground. A plutonium contaminated glove box was shipped to the

300 North Burial Ground on 6-8-60.

The Following Sites Were Consolidated With This Site:

Site Code: 600-265

Site Names: 600-265, Unidentified Pipes Near the 618-10 Burial Ground

Reason: Within Remediation Layback Area

Site Code: UPR-600-1

Site Names: UPR-600-1, Contamination Spread at 618-10 Burial Ground, UN-600-1

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-2

Site Names: UPR-600-2, Contamination Spread at 618-10, UN-600-2

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-3

Site Names: UPR-600-3, Contamination Spread at 618-10

Reason: Within Boundary Of Larger Site

Site Code: 618-11 Classification: Accepted

Site Names: 618-11, Y Burial Ground, 318-11, 300 ReClassification:

Wye Burial Ground

Site Type:Burial GroundStart Date:1962Site Status:InactiveEnd Date:1967

Site Description:

The burial ground perimeter is marked with concrete AC-540 markers numbered 2-68-1 through 2-68-28. The site surrounded by an 2.4 meter (8 foot) chain link fence with a locked gate. The fence labeled 618-11 Burial Ground and posted with Underground Radioactive Material signs.

The site consists of three "V" shaped trenches, 2 large diameter caissons and 50 vertical pipe storage units. The trenches are 270 meters (900 feet) long by 15 meters (50 feet) wide (surface dimensions) and 7.6 meters (25 feet) deep. The 50 vertical pipe storage units were made by welding five 208-liter (55-gallon) drums together. The welded drums formed a cylinder 56 centimeters (22 inches) in diameter, 4.6 meters (15 feet) long that was buried vertically. The bottoms of the units were 4.6 meters (15 feet) below ground surface. The units were open to the soil at the bottom. The two large diameter caissons were constructed of 2.4 meters (8 feet) diameter corrugated metal pipe, 3.0 meters (10 feet) long, with the top of the caisson being 4.6 meters (15 feet) below grade, connected to the surface by an offset 91-centimeter (36-inch) diameter pipe with a dome type cap. The caissons were open to the soil at the bottom. The bottoms of the caissons were 7.6 meters (25 feet) below ground surface. An additional 0.6 meters (2 feet) of topsoil was added to the site when it was surface stabilized in 1983.

Waste Type: Equipment

Waste Description:

The site contains a broad spectrum of low to high level dry wastes, including fission products and plutonium. Low-level wastes in cardboard boxes and large pieces of equipment were buried in the trenches. The trenches also include 55 gallon drums with high activity or small amounts of liquid, encased in cement. Most of the high activity wastes were remotely placed into the pipe storage units and caissons. These wastes were contained in small cans. Historical research related to the burial ground waste inventory resulted in the review of many Radiological Shipment Records (RSR's) and Radiological Survey Records. Many of these records were copied and bound into miscellaneous report documents. A summary is included in the 618-11 Expedited Response Proposal. One 1963 memorandum, authored by EA Berreth, indicates that all plutonium waste from the 325 building was to be sent to the 200 Area burial grounds. 325 building waste with high dose rates would be sent to 618-11 burial pipes.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-600-4

Site Names: UPR-600-4, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-5

Site Names: UPR-600-5, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-6

Site Names: UPR-600-6, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-7

Site Names: UPR-600-7, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-8

Site Names: UPR-600-8, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-9

Site Names: UPR-600-9, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-10

Site Names: UPR-600-10, Contamination Spread at 618-11

Reason: Within Boundary Of Larger Site

Site Code: 618-13 Classification: Accepted

Site Names: 618-13, 318-13, 303 Building ReClassification:

Contaminated Soil Burial Site

Site Type:Burial GroundStart Date:1950Site Status:InactiveEnd Date:1950

The unit consists of a mound of soil approximately 4.6 to 6.1 meters (15 to 20 feet) high by 38 meters (125 feet) long by 15 meters (50 feet) wide, covered with 0.6 meters (2 feet) of clean soil.

Waste Type: Soil

Waste This site received uranium contaminated topsoil removed from around the 303 Building area.

Description: Total activity buried in the site is not known.

Site Code: BTTF Classification: Accepted

Site Names: BTTF, Biological Treatment Test Facilities ReClassification: Closed Out (12/10/1996)

Site Type: Laboratory Start Date: 1988
Site Status: Inactive End Date: 1996

Site The unit consisted of various laboratories in the 324, 325, and 331 Buildings. The processing equipment covered under this unit included lab, bench, pilot, and full-scale treatment equipment.

Waste Type: Chemicals

Waste Wastes treated by the unit included listed waste, waste from non-specific sources, characteristic

Description: wastes, and state-only wastes.

Site Code: PCTTF Classification: Accepted

Site Names: PCTTF, Physical and Chemical Treatment ReClassification: Closed Out (5/13/1996)

Test Facilities

Site Type:LaboratoryStart Date:1979Site Status:InactiveEnd Date:1995

Site The unit consisted of the use of the 324 Building Biological Treatment Test Facilities, the 324 **Description:** Building Radiochemical Hot-Cell Complex, and the 325 Building Shielded Analytical Laborat

Building Radiochemical Hot-Cell Complex, and the 325 Building Shielded Analytical Laboratory to test treatment technologies for radioactive mixed waste and hazardous waste. The processing

equipment covered under this unit included lab and bench-scale treatment equipment.

Waste Type: Chemicals

Waste Waste treated by various processes included listed wastes, wastes from non-specific sources, characteristic wastes, and state-only wastes. Petroleum refining wastes were also included. The

processes used in this unit included pH adjustment, ion exchange processes, waste concentration,

precipitation/filtering, solids washing, catalytic destruction, and grouting.

Site Code: TTTF Classification: Accepted

Site Names: TTTF, Thermal Treatment Test Facilities ReClassification: Closed Out (5/13/1996)

Site Type:LaboratoryStart Date:1978Site Status:InactiveEnd Date:1996

Site The unit consists of various laboratories in the 324 and 325 Buildings and the in-situ vitrification

Description: (ISV) unit which is a transportable treatment unit. The processing equipment covered under this

unit included bench, engineering, pilot, and full-scale treatment equipment.

Waste Type: Chemicals

Waste Wastes treated by these processes included listed wastes, wastes from non-specific sources, characteristic wastes, and state-only wastes. In-situ vitrification is a thermal process that

converts contaminated soil and sludges into a glass and crystalline product. Non-volatilized contaminants are imobilized in the glass and crystalline product. Volatilized contaminants are recovered in a filtration system. Other vitrification processes explored in these units included

plasma arc pyrolysis, melters, and gamma-induced oxidation.

Site Code: UPR-300-1 Classification: Accepted

Site Names: UPR-300-1, 316-1A, 307-340 Waste Line ReClassification:

Leak, UN-300-1

Site Type:Unplanned ReleaseStart Date:1969Site Status:InactiveEnd Date:1969

Site Status. Inactive End Date. 1707

Description: Building. There is no readily apparent sign of subsurface contamination beneath the gravel

The site was a release to the soil in the area between the 307 Retention Basins and the 340

covered area.

Waste Type: Process Effluent

Site

Waste The waste discharged to the soil column consisted of process effluent contaminated by

Description: transuranic fission products including 900 curies of short-lived radionuclides (mainly

promethium-147) and 10 curies each of strontium-90 and cesium-137.

Site Code: UPR-300-2 Classification: Accepted

Site Names: UPR-300-2, Releases at the 340 Facility, **ReClassification:**

UN-300-2, UN-316-2

Site Type: Unplanned Release Start Date: 1954

Site Status: Inactive End Date:

Site The site appears to be multiple releases from ongoing decontamination and waste handling

Description: activities starting in January 1954.

Waste Type: Process Effluent

Waste 10 millicuries of cesium-137 is provided in the original source document and is designated as an

Description: estimate only. It is unknown if this was related to a single event or all events over the time

period (1954 to date).

Site Code: UPR-300-4 Classification: Accepted

Site Names: UPR-300-4, UN-300-4, Contaminated Soil **ReClassification:**

Beneath the 321 Building

Site Type:Unplanned ReleaseStart Date:1945Site Status:InactiveEnd Date:1955

Site The site is the soil beneath and south of the 321 Building. The site represents a number of releases that occurred from 1945 to 1988. This time period covers the development of the

REDOX, PUREX processes, and numerous other pilot operations. No specific occurrence reports have been identified. The true extent of the soil contamination is unknown. However, an area approximately 30.5 meters by 30.5 meters by 6.1 meters deep (100 feet by 100 feet by 20 feet

deep) is an estimation of the extent of the contamination.

Waste Type: Process Effluent

Waste Description:

Wastes and contamination in and around the 321 Building are very extensive. They include all of the components of the many chemical processes tested in this facility over the years and result from both waste management practices and from unplanned contamination events and accidents. Components of the bismuth phosphate process included many acids (nitric, phosphoric, hydrofluoric, oxalic, and others), bismuth nitrate, sodium dichromate, potassium permanganate, calcium, lanthanum and sodium fluorides, ammonium fluosilicate, peroxide, sodium hydroxide, and other substances. Components of the REDOX process and its development include methyl isobutyl ketone (hexone), aluminum nitrate, ammonium nitrate, many acids (including nitric, sulfuric, oxalic, and others), ferrosulfamate, sodium hydroxide, mercury, resins and other substances.

Components of the Metal Recovery process and the PUREX process were quite similar to each other and included tri-butyl phosphate, normal paraffin hydrocarbon, acids (including nitric, oxalic, and others), ammonium fluoride, ammonium nitrate and other substances. The RECUPLEX process used tri-butyl phosphate, carbon tetrachloride, many acids (including nitric, oxalic, hydrofluoric, and others), sodium fluoride, sodium hydroxide, and other substances. All of these chemicals became waste constituents, along with trace isotopes of plutonium, uranium, thorium, strontium, cesium, aluminum, iron, copper, and zinc. Additionally, cell and equipment decontamination reagents, cleansers, and drying materials, including carbon tetrachloride, trichlorethylene, acetone, A-butanone, and many commercial products, became a part of the 321 waste stream.

Because the 321 Building was a pilot plant, the Building's mission changed a number of times. These mission changes altered the potential contaminants that may have contributed to the soil contamination. Listed below are some of the mission changes and potential contaminants.

When the original hot laboratory facilities in the A and B Cells of T Plant had been disassembled to make room for a radioactive lanthanum production mission, some of the testing with higher activity radiochemical solutions was initiated in the 321 Building. These tests continued until 'C' Plant (Hot Semi-Works) was constructed in the 200 East Area in 1949.

Subsequent defense production expansions from 1950 to 1955 generated the development of the Uranium Plant Metal Recovery process, the PUREX process, and the reclamation of uranium and plutonium by extraction (RECUPLEX) process. Pilot scale developmental testing using low activity solutions for all of these processes was conducted in the 321 Building. Reduction-oxidation process improvement trials, including mercury-catalyzed dissolving studies, also were conducted during this period.

Beginning in the late 1950's, in response to orders from the National Aeronautics and Space Administration (NASA) and from hospitals and medical laboratories and research centers, chemists embarked on the development of several pioneering methods of extracting high-heat isotopes from high level nuclear waste. Among the most prominent isotopes extracted were strontium-90, cesium-137, cerium-144, promethium-147, and neptunium-237. At one time in the 1960's, Hanford was the only producer in the world of promethium-147, a rare earth extract that was used in the development of the artificial heart. Extraction of these isotopes was accomplished by ion exchange, solvent extraction, carrier precipitation, and other means. Many of the pilot scale development tests for these extractions were conducted using tracer level waste solutions. During the 1950's and 1960's, several attempts were made to produce uranium-233 from thorium. These processes used chemical separation of various forms of thorium target fuel elements (powders, pellets, wafers, with many oxide blends) after irradiation.

A general cleanup of the building during 1946 to 1947 revealed radioactive material in lead sink traps of cold areas and maximum readings of 50,000 disintegrations per minute in other building locations. During January and February of 1947, a total of nearly 800 micrograms of plutonium was flushed from the inside of process lines and tanks in the 321 Building. Late that year, a large disposal of uranyl nitrate hexahydrate solution to the 300 Area Process Pond spiked radioactivity readings in that pond so high that a decision was made to build the special 321 Cribs to contain uranium bearing 321 Building solutions. By April 1948, 321 Building operations had discharged 238 pounds of uranium to the 300 Area Process Pond. Early that year, building modifications revealed plutonium contamination in the concrete of sampling boxes in cold areas of the canyon, and readings up to 45,000 disintegrations per minute (alpha) were discovered in sludge inside tank 1-AU.

Solid radioactive and chemical wastes from the 321 Building were buried in all of the various burial grounds used in the 300 Area (with the possible exception of 618-9). Nitrous oxide fumes from bismuth phosphate process tests and fission gases including iodine-131 from all separations processes tests escaped form the 321 Building stack.

The Following Sites Were Consolidated With This Site:

Site Code: 300-81

Site Names: 300-81, 321 Building Steam Condensate, Miscellaneous Stream #370

Reason: Within Boundary Of Larger Site

Site Code: 300-82

Site Names: 300-82, 321 Building Steam Condensate, Miscellaneous Stream #371

Reason: Within Boundary Of Larger Site

Site Code: 300-83

Site Names: 300-83, 321 Building Steam Condensate, Miscellaneous Stream #372

Reason: Within Boundary Of Larger Site

Site Code: 300-84

Site Names: 300-84, 321 Building Vent Valve on Water Line, Miscellaneous Stream #348

Reason: Within Boundary Of Larger Site

Site Code: 300-92

Site Names: 300-92, 321 Building Stormwater Runoff, Miscellaneous Stream #680

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-5 Classification: Accepted

Site Names: UPR-300-5, UN-300-5, Spill at 309 ReClassification:

Storage Basin

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The site was a release that contaminated the storage basin area, the filter vault, the stack base, the

Description: truck stall, and the truck ramp outside the 309 Building. Currently, the truck ramp is paved with

asphalt. No radiological postings or markers are present to identify the location of this release.

Waste Type: Process Effluent

Waste The Description:

The waste was low-level radioactive water. The primary isotope was cesium-137.

Surveys of the truck ramp outside of the building and of the truck stall floor within the storage basin area prior to initial decontamination revealed direct radiation levels to 20 millirad per hour

and smearable contamination of 30 millirad per hour, respectively. The smearable contamination within the truck stall and on the floor in the storage basin area was initially reduced by flushing with water to levels up to 7,000 counts per minute (wet), 25,000 counts per minute (dry), and 4,000 counts per minute (wet), 10,000 counts per minute (dry), respectively. Further decontamination efforts reduced these levels to 7,000 counts per minute (dry) and 1,000 counts per minute (dry), respectively. Air concentrations remained normal following the

incident. No detectable radioactive stack emissions were revealed by the continuous exhaust air monitoring equipment or the air sampling system in the stack pit.

Site Code: UPR-300-7 Classification: Accepted

Site Names: UPR-300-7, UN-300-7, Oil Spill at 384 ReClassification: Closed Out (8/24/1999)

Building

Site Type:Unplanned ReleaseStart Date:1972Site Status:InactiveEnd Date:1972

Site Description:

The release site was to the ground and concrete valve pits around the underground day tanks located behind the 384 Building (300 Area Powerhouse). The area is paved with asphalt. There is no visual evidence of a spill. Most of the spilled oil was contained in the underground, concrete pits that surround the day tanks.

This site was closed out in conjunction with the North Process Pond.

Waste Type: Oil

Waste Description:

The release consisted of approximately 3,220 liters (850 gallons) of #6 fuel oil. An estimated 3,028 liters (800 gallons) were recovered in cleanup operations. Approximately, 114 liters (30 gallons) were conveyed to the powerhouse, of which (20 gallons) went to the ash pits and 38 liters (10 gallons) were observed at the process pond (WIDS Site 316-2). That would leave approximately 38 liters (10 gallons) that may have remained in the soil between the day tanks, the powerhouse facility, piping, the ash pits or process ponds. All values are approximate (as stated in the incident report).

Site Code: UPR-300-10 Classification: Accepted

Site Names: UPR-300-10, Contamination Under 325 ReClassification:

Bldg., UN-300-10

Site Type:Unplanned ReleaseStart Date:1977Site Status:InactiveEnd Date:1977

Site The site was an unplanned release to the soil beneath the northwest corner of the 325 Building.

Description:

Waste Type: Chemicals

Waste UPR-300-10 included waste from dissolution of highly radioactive samples including irradiated

Description: reactor fuels.

Site Code: UPR-300-11 Classification: Accepted

Site Names: UPR-300-11, Underground Radioactive **ReClassification:**

Liquid Line Leak, UN-300-11

Site Type: Unplanned Release Start Date: 1977
Site Status: Inactive End Date: 1977

Site The site was a release to the soil that involved a 1.22 meter (4 foot) diameter column of gravel-covered soil in the 340 Complex yard, located immediately south of the 340 Vault. The release

occurred around and below a leaking flanged-tee that connected the Retired Radioactive Liquid

Waste Sewer (RRLWS) to the 340 Vault.

Waste Type: Process Effluent

Waste Soil samples collected near the broken pipe were analyzed and yielded concentrations of 0.2

Description: strontium-90, 0.24 europium-155, 0.09 cerium-144, 0.0017 plutonium-239 and 240, and 0.014

americium-241 and plutonium-238 (all microcuries per cubic centimeter). Approximately 1

curie of contamination was left in place.

Site Code: UPR-300-12 Classification: Accepted

Site Names: UPR-300-12, UN-300-12, Contaminated ReClassification:

Soil Beneath the 325 Building

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

Site The site was an unplanned release to the soil under the floor on the east side of the 325-A

Description: Building.

Waste Type: Process Effluent

Waste The site received radioactive rinse water overflow containing nitrate ions, promethium-147, **Description:** fission products, and transuranic nuclides. The total activity in the rinse water was estimated to

be 70 Curies, of which 95% was promethium-147. The rinse water contained nitrate ions, promethium-147, fission products, and transuranic radionuclides. Nitrate ions, but no

radionuclides, were detected in samples taken from a nearby groundwater monitoring well. PNL (Occurrence Report #79-2) reports that coring through the cement floor of Room 50-A and

sampling of the soils below was completed on January 26, 1979.

Site Code: UPR-300-13 Classification: Accepted

Site Names: UPR-300-13, UN-300-13, Acid ReClassification: Rejected (2/12/1999)

Neutralization Tank Leak East of 333

Building

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The release site was the soil adjacent to the underground spent acid receiver tank that was located

Description: east of the 333 Building and adjacent to the 618-1 Burial Ground. The tank pit depth was 3.05 meters (10 feet) below grade. There is currently no visual evidence of the tank or this release.

The 334-A Building was built on top of the area where the tank was removed.

Waste Type: Process Effluent

Waste The waste contained process acid that included 4,432 pounds (2,012 kilograms) of nitrate, 447

Description: pounds (202.9 kilograms) of copper, and 3 pounds (1.4 kilograms) of uranium.

The Site Was Consolidated With:

Site Code: 618-1

Site Names: 618-1, Solid Waste Burial Ground No. 1, 318-1

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-14 Classification: Accepted

Site Names: UPR-300-14, UN-300-14, Acid Leak at ReClassification: Rejected (2/12/1999)

334 Tank Farm

Site Type:Unplanned ReleaseStart Date:1975Site Status:InactiveEnd Date:1975

Site The release site was a limestone pit designed to neutralize spilled acid before the acid was

Description: released to the underlying ground.

Waste Type: Chemicals

Waste The release consisted of 93% sulfuric acid.

Description:

The Site Was Consolidated With:

Site Code: 618-1

Site Names: 618-1, Solid Waste Burial Ground No. 1, 318-1

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-17 Classification: Accepted

Site Names: UPR-300-17, UN-300-17, Metal Shavings ReClassification:

Fire

Site Type:Unplanned ReleaseStart Date:1979Site Status:InactiveEnd Date:1979

Site The release site was the asphalt area at the southeast corner of Building 333. The site is not **Description:** marked or labeled in the field, and its location is not apparent. The site falls within a

"Radiologically Controlled Area" that surrounds the 333 Building on its north, south and east sides. The asphalt and concrete at the southeast corner of 333 are painted gray and labeled "Fixed Contamination Area." The unpainted asphalt east of the "Fixed Contamination Area" is old and

cracked. There is no clear indication where the asphalt was replaced in 1979.

East of the unpainted asphalt area, there is a fire hydrant and an automatic sprinkler valve surrounded by gravel and broken asphalt and concrete. Even further east, there is an expanse of gravel. East/northeast of the southeast corner, there is a large "Contamination Area." An approximately 0.6 meter (24 inch) diameter metal manhole is located in the "Fixed Contamination Area." It is unlabeled except for a "Confined Space" sign. In the asphalt area east of the "Fixed Contamination Area," there is an approximately 0.4 meter (16 inch) diameter drain with a metal grate and an approximately 0.6 meter (24 inch) diameter metal manhole with perforations. The 0.4 meter (16 inch) drain is labeled "Radioactive Material, Internally Contaminated." The 0.6 meter (24 inch) metal manhole is labeled "Sewer" and "Danger, Limited Access/Confined Space."

Waste Type: Chemicals

Waste The waste consisted oily rags and other waste material, including what was believed to be

Description: uranium shavings.

Site Code: UPR-300-18 Classification: Rejected (2/12/1999)

Site Names: UPR-300-18, UN-300-18 ReClassification:

Site Type:Unplanned ReleaseStart Date:1962Site Status:InactiveEnd Date:1962

Site On August 27, 1962, an employee was sprayed by a release from a low-level cesium-134 waste

Description: line

 Waste Type: Process Effluent

Waste The Occurrence Report states that the waste line carried low-level cesium-134, but the emitter

Description: isotope was cesium-137.

Site Code: UPR-300-31 Classification: Rejected (2/12/1999)

Site Names: UPR-300-31, UN-300-31 ReClassification:

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site This site is a duplicate of UPR-300-40 (See Site Comment Section).

Description:

Site Code: UPR-300-38 Classification: Accepted

Site Names: UPR-300-38, Soil Contamination Beneath **ReClassification:**

the 313 Building

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site is the contaminated soil beneath the southern half of the 313 Building. The

Description: contamination resulted from multiple unplanned release events. The full extent of contamination

will not be determined until the 313 Building is decommissioned.

Waste Type: Chemicals

Waste Materials released to the soil beneath the building may have included uranium-bearing acid **Description:** (nitric and sulfuric acid with uranium in solution), neutralized acid waste (typically sodium

fluoride, sodium nitrate, sodium dichromate, and sodium sulfate in solution with precipitates of uranium, chromium, copper and zirconium), etch acids (nitric, hydrofluoric, sulfuric, and chromic acids), tetrachloroethene (perchloroethylene), sodium hydroxide solutions, and

contaminated water.

The Following Sites Were Consolidated With This Site:

Site Code: UPR-300-44

Site Names: UPR-300-44, 313 Building, Uranium Bearing Waste Etch-Acid Spill, UN-300-44

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-39 Classification: Accepted

Site Names: UPR-300-39, UN-300-39, Sodium ReClassification:

Hydroxide Leak at 311 Tank Farm

Site Type:Unplanned ReleaseStart Date:1954Site Status:InactiveEnd Date:1954

Site The release site was to the soil adjacent to the caustic storage tanks in the 311 Tank Farm. The

Description: two sodium hydroxide (NaOH) tanks are currently labeled "Empty." The location and extent of the release is not discernible in the field. The ground around the two tanks is covered by a

concrete containment, that is surrounded by more concrete and gravel. The concrete containment

is not marked or labeled in any way to warn about excavating in the area.

Waste Type: Chemicals

Waste The waste consisted of caustic solution containing 50 percent sodium hydroxide solution.

ReClassification:

ReClassification: Closed Out (2/24/1999)

Description:

Site Code: UPR-300-40 Classification: Accepted

Site Names: UPR-300-40, Acid Release at the 303-F

Pipe Trench, UN-300-40, UPR-300-31,

UN-300-31

Site Type: Unplanned Release Start Date: 1974
Site Status: Inactive End Date: 1974

Site The release site was to the soil between the 311 Tank Farm and the 303-F Building.

Description:

Waste Type: Chemicals

Waste The waste consisted of uranium-bearing acid waste containing nitric and sulfuric acid with

Description: uranium in solution and chromic acids with copper and zinc in solution.

Site Code: UPR-300-41 Classification: Accepted

Site Names: UPR-300-41, 300 Area #340 Building

Phosphoric Acid Spill, UN-300-41

Site Type:Unplanned ReleaseStart Date:1986Site Status:InactiveEnd Date:1986

Site The release involved asphalt and soil in the 340 Complex yard. Facility personnel do not know

Description: the exact location of the spill.

Waste Type: Chemicals

Waste A detailed analysis on a sample taken from the leaking drum showed the released liquid consisted of phosphoric acid containing 14,000 parts per million chromium, 1,900 parts per

million manganese, 1,700 parts per million iron, and 400 parts per million nickel.

Site Code: UPR-300-42 Classification: Accepted

Site Names: UPR-300-42, 300 Area Powerhouse Fuel **ReClassification:**

Oil Spill, UN-300-42

Site Type:Unplanned ReleaseStart Date:1983Site Status:InactiveEnd Date:1983

Site This release is not visible. The adjacent day tanks (300-223) have been remediated, but this release was not removed because of concerns regarding the foundation of the building. The

n: release was not removed because of concerns regarding the foundation of the building. The release was an overflow of Number 6 fuel oil onto the ground adjacent to the Number 2 Day

Tank, an underground storage tank. The surface area around the day tanks was paved with asphalt.

Waste Type: Oil

Waste The release consisted of approximately 750 to 1135 liters (200 to 300 gallons) of #6 fuel oil.

Description:

Site Code: UPR-300-43 Classification: Accepted

Site Names: UPR-300-43, 300 Area Solvent Refined ReClassification: Rejected (9/22/1998)

Coal Spill, UN-300-43

Site Type: Unplanned Release Start Date: 1986
Site Status: Inactive End Date: 1986

Site The site is an unplanned release to the soil adjacent to the 329 Building. All discolored soil was

Description: removed from the site. No occurrence report could be found for this site.

Waste Type: Chemicals

Waste The release consisted of solvent-refined coal (light fraction) that was spilled to the ground.

Description:

Site Code: UPR-300-44 Classification: Accepted

Site Names: UPR-300-44, 313 Building, Uranium ReClassification: Rejected (2/12/1999)

Bearing Waste Etch-Acid Spill, UN-300-44

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1985

Site The release site was to the soil around a section of process sewer line. The information for this

Description: site has been incorporated into WIDS Site UPR-300-38. UPR-300-38 addresses the soil

contamination under the 313 Building.

Waste Type: Process Effluent

Waste The release consisted of wastewater and possibly uranium-bearing acid (nitric and sulfuric acid

Description: with uranium in solution) or waste-etch acid (nitric, hydrofluoric, and chromic acids with

uranium, copper, and zirconium metals in solution) to the soil. The spill area was possibly

contaminated with byproduct waste material.

The Site Was Consolidated With:

Site Code: UPR-300-38

Site Names: UPR-300-38, Soil Contamination Beneath the 313 Building

Reason: Within Boundary Of Larger Site

Site Code: UPR-300-45 Classification: Accepted

Site Names: UPR-300-45, 303-F Building Uranium- **ReClassification:**

Bearing Acid Spill, UN-300-45

Site Type:Unplanned ReleaseStart Date:1985Site Status:InactiveEnd Date:1985

Site The release site was to the soil beneath the transfer piping, adjacent to the 303-F Building. The **Description:** uranium-bearing acid transfer line runs through the pipe trench from the 333 Building to the valve

box at the southeast corner of the 313 Building outside the Uranium Recovery Room. The 5.1

centimeter (2 inch) stainless steel line leaves the top of the valve box, runs up the wall of the 313 Building and enters the building as an overhead line in the 313 Uranium Recovery Room.

Waste Type: Process Effluent

The leak contained uranium-bearing waste acid identified as nitric and sulfuric with uranium in Waste

solution. Analysis showed the solution to contain 3,480 parts per million nitrate, 6,960 parts per **Description:**

million sulfate, and 920 parts per million uranium.

Site Code: UPR-300-46 **Classification:** Accepted

UPR-300-46, Contamination North of 333 **Site Names: ReClassification:**

Building

Unplanned Release **Start Date:** 1989 Site Type: **Site Status:** Inactive **End Date:** 1989

The release site was a layer of radioactively contaminated soil found during a pipe trench Site

excavation. There is currently no visual evidence of the release. The area is not marked or posted. **Description:**

The gravel east of the telephone pole along the north perimeter fence appears to be slightly newer

than other gravel in the vicinity.

Process Effluent **Waste Type:**

The contaminated soil was analyzed, and it was determined that the soil did not contain any Waste significant quantities of hazardous chemicals. The truck load of contaminated soil was disposed **Description:**

of as low-level waste. The contamination was likely caused by a spill of Uranyl Nitrate.

UPR-300-48 **Classification: Site Code:** Accepted

Site Names: UPR-300-48, 325 Building Basement **ReClassification:**

Topsy Pit

Site Type: Unplanned Release **Start Date:**

Site Status: Inactive **End Date:** 1991

The site is radioactively contaminated soil that occurred as a result of a release through a crack in Site

the process sewer drain pipe elbow. **Description:**

Waste Type:

Waste The site received radioactive liquid from a leak in the process sewer drain pipe. The site was **Description:**

discovered during dye testing of drains during development of the Facility Effluent Monitoring

Plan development for the 325 Building. The contamination may have resulted from routine

releases and accumulated in the soil under the crack

Samples of the soil under the drain were analyzed for gross radioactivity and for hazardous metals by TCLP. Radioactivity up to 1700 disintegrations per minute alpha was detected. The

TCLP results were below regulatory limits.

UPR-400-1 Site Code: Classification: Accepted

UPR-400-1, 400 Area Coolant Spill, UN-**ReClassification:** Rejected (12/3/1998) **Site Names:**

400-1

Site Type: Unplanned Release Start Date:
Site Status: Inactive End Date:

Site The site was an unplanned release that occurred during the construction of FFTF. This site is

Description: located somewhere in a field that is now a vegetation-free, gravel-covered area shaped like a semicircle bordered by an asphalt-covered roadway and parking area. The specific location can

not be identified. There is no occurrence report for the site.

Waste Type: Chemicals

Waste The waste consisted of approximately 189.3 liters (50 gallons) of a coolant solution consisting of

Description: 50% water and 50% ethylene glycol.

Site Code: UPR-600-1 Classification: Accepted

Site Names: UPR-600-1, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

10 Burial Ground, UN-600-1

Site Type:Unplanned ReleaseStart Date:1961Site Status:InactiveEnd Date:1961

The release originated in the 618-10 Burial Ground. It contaminated the environment in the vicinity of the burial ground, extending 274 meters (300 yards) out from the burial ground fence,

with radioactive particulates. The 618-10 Burial Ground has been surface stabilized and vegetated with grasses. The burial ground is fenced and posted as Underground Radioactive

Material.

Waste Type: Ash

Waste The waste consisted of burned "CWS" filters and an unknown amount of other materials.

Description:

Waste Type: Chemicals

Waste The waste consisted of approximately 200 boxes of contaminated materials.

Description:

The Site Was Consolidated With:

Site Code: 618-10

Site Names: 618-10, 300 North Solid Waste Burial Ground, 318-10

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-2 Classification: Accepted

Site Names: UPR-600-2, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

10, UN-600-2

Site Type: Unplanned Release Start Date: 1963
Site Status: Inactive End Date: 1963

Site Contamination from this incident was identified in a 1.5 meter (5 foot) radius around the burial

Description: receptacle in the 618-10 Burial Ground, an area in front of the burial ground access gate, and a

spot in front of the 300 Area Powerhouse. The 618-10 Burial Ground has since been stabilized

and revegetated. The burial ground is posted with Underground Radioactive Material signs.

Waste Type: Chemicals

Waste Contamination detected at the time of the release ranged from 60,000 to 80,000 counts per **Description:** minute around the barrel in the 618-10 Burial Ground, 40,000 counts per minute in front of the

300 Area Powerhouse, and 80,000 counts per minute in front of the burial ground access gate.

The Site Was Consolidated With:

Site Code: 618-10

Site Names: 618-10, 300 North Solid Waste Burial Ground, 318-10

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-3 Classification: Accepted

Site Names: UPR-600-3, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

10

Site Type:Unplanned ReleaseStart Date:1963Site Status:InactiveEnd Date:1963

The release site was an area of soil around a burial barrel within the 618-10 Burial Ground. The release area was surface stabilized with the rest of the burial ground in 1983. The burial ground is

fenced and posed as an Underground Radioactive Material area.

Waste Type: Chemical Release

Waste The waste consisted of radioactive dust that was improperly containerized.

Description:

The Site Was Consolidated With:

Site Code: 618-10

Site Names: 618-10, 300 North Solid Waste Burial Ground, 318-10

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-4 Classification: Accepted

Site Names: UPR-600-4, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type:Unplanned ReleaseStart Date:1964Site Status:InactiveEnd Date:1964

Site The release consisted of an area of soil contamination in the 618-11 Burial Ground. The release

Description: site was surface stabilized along with the rest of the burial ground in 1983.

Waste Type: Chemicals

Waste The release consisted of radioactive waste from the High-Level Radiochemistry Facility. The

Description: waste had readings of up to 10,000 counts per minute.

The Site Was Consolidated With:

THE OILE TRUS CONSCINUATED THEIR

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-5 Classification: Accepted

Site Names: UPR-600-5, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type:Unplanned ReleaseStart Date:1964Site Status:InactiveEnd Date:1964

Site The release site was covered with a layer of clean material immediately after the release. The

Description: release site consisted of an area of soil in the 618-11 Burial Ground. The 618-11 Burial Ground

was surface stabilized in 1983. The burial Ground is fenced and posted as Underground

Radioactive Material.

Waste Type: Chemicals

Waste The release consisted of gross fission products with beta and gamma contamination. The wastes

Description: were generated in the Radio Chemistry Building (325 Building) and packaged in cars.

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-6 Classification: Accepted

Site Names: UPR-600-6, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type:Unplanned ReleaseStart Date:1965Site Status:InactiveEnd Date:1965

Site The release contaminated an area of soil within the 618-11 Burial Ground. The 618-11 Burial **Description:** Ground was surface stabilized in 1983. The burial ground is fenced and posted Underground

Radioactive Material.

Waste Type: Chemicals

Waste The waste consisted of ruthenium-103 and zirconium-niobium-95 with readings from 100 counts

Description: per minute to 200 millirads/hour.

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-7 Classification: Accepted

Site Names: UPR-600-7, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type:Unplanned ReleaseStart Date:1965Site Status:InactiveEnd Date:1965

Site The release site was an area of ground in the 618-11 Burial Ground. The 618-11 Burial Ground

Description: was surface stabilized in 1983. The burial ground is fenced and posted as Underground

Radioactive Material.

Waste Type: Chemicals

Waste The waste was generated at the high-level radiochemistry building (327 Building). The waste

Description: consisted of a dust from a highly contaminated filter.

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-8 Classification: Accepted

Site Names: UPR-600-8, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type:Unplanned ReleaseStart Date:1967Site Status:InactiveEnd Date:1967

Site The release contaminated an area of soil in the 618-11 Burial Ground. Following the release, area

Description: was covered with a layer of clean gravel. The 618-11 Burial Ground was surface stabilized in

1983. The burial ground is fenced and posted as Underground Radioactive Material

Waste Type: Chemicals

Waste The waste consisted of, in-part, aluminum rupture cans that had been inspected in the High-Description: Level Radio Chemistry Facility (327 Building). The fact that the airborne contaminant was a

"fairly fresh fission product" indicates that it was picked up by the cans during transfer

operations through "A" cell in the 327 Building.

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-9 Classification: Accepted

Site Names: UPR-600-9, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

11

Site Type: Unplanned Release Start Date: 1967

Site Status: Inactive End Date: 1967

Site The contamination spread was a large fan-shaped area extending in a northeast direction from the burial site. The contamination inside the burial ground was covered with gravel. Contamination

outside the fence was turned under and the site was released from radiation zone status. The entire 618-11 Burial Ground was surface stabilized in 1983. An area outside the fence known as the "Wind Row" site was released from radiological control in 1972. The rows of soil are still

visible, but the area is not marked or posted.

Waste Type: Chemicals

Waste The release consisted of airborne contamination from corroded aluminum rupture cans and

Description: pieces of an N Reactor safety rod from the 327 Building.

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-10 Classification: Accepted

Site Names: UPR-600-10, Contamination Spread at 618- ReClassification: Rejected (2/24/1999)

1 1

Site Type:Unplanned ReleaseStart Date:1963Site Status:InactiveEnd Date:1963

Site The release contaminated an area of soil in the northeast corner of the 618-11 Burial Ground. **Description:** The 618-11 Burial Ground was surface stabilized in 1983. The burial ground is fenced and

posted as Underground Radioactive Contamination.

Waste Type: Chemicals

Waste The release consisted of high-level beta and gamma contamination with readings of up to 1.4

Description: rads/hour at 7.6 centimeters (3 inches).

The Site Was Consolidated With:

Site Code: 618-11

Site Names: 618-11, Y Burial Ground, 318-11, 300 Wye Burial Ground

Reason: Within Boundary Of Larger Site

Site Code: UPR-600-22 Classification: Accepted

Site Names: UPR-600-22, WPPSS Windrow Site, 600- ReClassification:

21

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

The site consists of a series of small parallel berms, which are approximately 0.6 meters (2 feet), **Description:** 0.9 meters (3 feet) wide and 91 meters (100 yards) long. The berms are arranged to form a

triangle approximately 137 meters (150 yards) by 91 meters (100 yards) long. Perimeter berms are approximately 1.2 meters (4 feet) tall.

Waste Type: Soil

Waste Description:

The area was contaminated prior to 1972 with particulate fallout from burial activities in the 618-11 Burial Grounds. The contaminated area was covered by scraping the affected ground into windrows. On October 24, 1972, a backhoe was used to cut across each windrow at a spacing of

every 15 meters (50 feet) to a depth of 15 centimeters (6 inches) below ground level.

Radiological surveys were made of all soils removed and of the walls of each cut. No beta, gamma, or alpha radioactivity was detected above the normal background of 100 counts/minute.

1100-EM-1

Site Code: 600-2 Classification: Accepted

Site Names: 600-2, Army Landfill ReClassification: Rejected (5/9/2000)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is an excavated pit in a dune area. The bottom is covered with wind-blown sand, cheatgrass and tumbleweeds. Only a few pieces of wire, rebar, and concrete are visible.

Waste Type: Misc. Trash and Debris

Waste Reports indicate some materials may have been of military origin. No hazardous materials were **Description:** indicated in reports or on walkdowns. Some metal debris and a few chunks of concrete were

visible in 1998 and 2000. Some wire was found in an adjoining gully.

Site Code: 1100 HPADS Classification: Accepted

Site Names: 1100 HPADS, 1100 Area Hanford Patrol ReClassification: Closed Out (9/6/1995)

Academy Demolition Site

Site Type:Depression/Pit (nonspecific)Start Date:1984Site Status:InactiveEnd Date:1995

Site The site consisted of two demolition areas that were used by the Hanford Patrol to detonate

Description: discarded explosive chemical products generated on the Hanford Site. These products were either

excess material or beyond their designated shelf life.

The site was a treatment unit for nonradioactive explosive, ignitable, shock-sensitive, and/or reactive discarded chemical products. The discarded chemical products treated at the site all exhibited the dangerous waste characteristics of ignitability and reactivity. Some of the discarded chemical products also exhibited the dangerous waste characteristic of corrosivity and may have had the state-only designations for toxic extremely hazardous waste, toxic dangerous waste, persistent halogenated hydrocarbons, extremely hazardous waste, persistent polycyclic aromatic hydrocarbons, extremely hazardous waste, and/or carcinogenic dangerous waste.

The treatment design capacity of the site was 568 liters (150 gallons) of discarded explosive chemical products per day. The last detonation event at the site took place on October 27, 1991.

Waste Type: Chemicals

Waste The unit was used for the treatment of shock-sensitive or potentially explosive chemical wastes.

Description: The following detonations took place: 1984: Ethyl Ether 169 g (0.37 lb), Perchloric Acid 44.3

kg (97.7 lb), Nitric Acid 1.42 kg (3.13 lb); 1985: 2,4,6-Trinitrorescorcinol 25 g (0.06 lb), 2,4-

Dinitrorescorcinol 70 g (0.15 lb), 2,4-Dinitrophenol 500 g (1.10 lb), Alpha-

Nitrosomethylisobutylketone 174 g (0.38 lb), Trinitrotoluene 100 g (0.22 lb), Tetrahydrofuran 36 kg (79.4 lb), Picryl Chloride 300 g (0.66 lb), Picryl Acid 100 g (0.22 g), Perchloric Acid 4.4 kg (9.7 lb), Ethyl Ether 4.7 kg (10.4 lb), Hexadinitrophenylamine 70 g (0.15 lb), Glycol Dimethyl Ether 500 g (1.1 lb), Carbon Trichloride 600 g (1.3 lb), Carbon Disulfide 1,100 g (2.4 lb), Butyl Ethanol 9.5 kg (20.9 lb), Butyl Cellosolve 100 g (0.22 lb), Benzene with N-Butyl Lithium 100 g (0.22 lb); 1986: None; 1987: Ethyl Ether 20 kg (44.1 lb), Picric Acid 200 g

(0.44 lb).

Site Code: 1100-1 Classification: Accepted

Site Names: 1100-1, Battery Acid Pit, 1171 Building ReClassification: Deleted From NPL (9/30/1996)

Sandpit Spills, UPR-1100-1

Site Type:Depression/Pit (nonspecific)Start Date:1954Site Status:InactiveEnd Date:1977

Site This site has been cleaned up under the 1100 Area Record of Decision. The 1100-1 Battery Acid

Description: Pit was an unlined, sand-filled pit excavated in native soil. The site is not visible at the surface.

The pit was backfilled to grade when it was withdrawn from service.

Waste Type: Chemicals

Waste Historical documents record an estimated 15,000 gallons (57,000 liters) of battery acid wastes **Description:** may have been disposed of between 1954 and 1977. Other substances including antifreeze and

solvents may have also been disposed of at the site. The sand lining was removed and deposited in an undisclosed location when the sand became saturated. New sand was then added to the pit

for further acid disposal.

Site Code: 1100-2 Classification: Accepted

Site Names: 1100-2, Paint and Solvent Pit, UPR-1100-2 ReClassification: Deleted From NPL (9/30/1996)

Site Type: Depression/Pit (nonspecific) Start Date: 1954
Site Status: Inactive End Date: 1985

Site

Description:

Waste Type: Chemicals

Waste Paint, solvents, and thinners may have been disposed of in this location.

Description:

Waste Type: Construction Debris

Waste The site received construction debris from Hanford Site demolition activities. Principal

Description: components of the waste included concrete rubble, asphalt, and wood debris.

Site Code: 1100-3 Classification: Accepted

Site Names: 1100-3, Antifreeze and Degreaser Pit, ReClassification: Deleted From NPL (9/30/1996)

Antifreeze Pit, UPR-1100-3

Site Type:Depression/Pit (nonspecific)Start Date:1979Site Status:InactiveEnd Date:1985

Site The site was originally a gravel pit used as a source of backfill material. This contaminated soils

Description: have been cleaned up under the 1100 Area Record of Decision. The site currently appears as a

shallow roughly circular depression.

Waste Type: Chemicals

Ethylene glycol, degreasing solvents and wash water from engine cleaning may have been Waste

Description: disposed of at this site although it is not documented.

Waste Type: Construction Debris

Waste Construction waste material including roofing and concrete rubble was disposed of at this site.

Description:

Site Code: 1100-4 **Classification:** Accepted

Site Names: 1100-4, Antifreeze Tank Site, UN-1100-4, **ReClassification:** Deleted From NPL (9/30/1996)

1171 Building Spills, UPR-1100-4

1976 Storage Tank Site Type: **Start Date:** Inactive **End Date:** 1986 **Site Status:**

Site This site was cleaned up under the 1100 Area Record of Decision. This site is the former location

of a steel underground storage tank. **Description:**

Waste Type: Chemicals

The unit stored waste antifreeze until removal in 1986. Recent investigations have found metals Waste

Description: contamination and slight ethylene glycol contamination.

1100-9 **Site Code: Classification:** Accepted

1100-9, 1164 Building 90-Day Waste **ReClassification:** Rejected (9/14/2000) **Site Names:**

Accumulation Area

Site Type: Storage Pad (<90 day) **Start Date:**

1998 **Site Status:** Inactive **End Date:**

The 90 Day Storage Area was inside the 1164 Building, a small (15 by 11 meters [48 by 36 feet]) Site

steel structure surrounded by gravel and pavement. The Building is closed, and has transferred to **Description:**

the Port of Benton. However, the Port has not started to use it yet.

Waste Type: Chemicals

Waste The wastes stored here were materials (for example, rags and brushes) and paints left over from

Description: marking sensitive equipment.

Site Code: 1100-11 **Classification:** Accepted

Site Names: 1100-11, Ephemeral Pool **ReClassification:** Deleted From NPL (9/30/1996)

Site Type: Start Date: Pond

End Date: 1995 **Site Status:** Inactive

The site has been regraded to a smooth, uniform surface. The Ephemeral Pool site was a long, Site **Description:**

narrow depression designed to act as a drainage collection point for precipitation runoff flowing

from the 1171 parking area. The north and south boundaries of the site were not distinct because the depression gradually rose toward both the north and south to near the elevation of the surrounding land. Settlement and/or poor grading of the depression floor resulted in the formation of a series of linked pools after rainfall events that temporarily held a portion of the

Hanford Site Waste Management Units Report January 2004

collected moisture within the drainage way until it evaporated or infiltrated into the ground. A pervious gravel lining encouraged infiltration of the collected runoff into the vadose zone beneath this site.

Waste Type: Stormwater Runoff

Waste The site was designed to receive stormwater runoff from the adjacent 1171 Building parking

Description: area.

Waste Type: Chemicals

Waste Before cleanup, soil sampling indicated the presence of PCB's (Aroclor 1260) at concentrations

Description: ranging from 300 to 42,000 micrograms per kilogram.

Site Code: 1100-12 Classification: Accepted

Site Names: 1100-12 Dumping Areas ReClassification: Rejected (5/9/2000)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site is miscellaneous pre-Hanford debris consisting of old concrete, glass, and metal (e.g., **Description:** camp stove, food cans, buckets, and wire). The decayed batteries previously reported were not

camp stove, food cans, buckets, and wire). The decayed batteries previously reported were not seen on May 4, 2000. Two separate areas of debris were reported in 1996 and 1998, but only

one is evident in 2000.

Waste Type: Batteries

Waste Dry cell batteries were observed at the site in 1996. Vegetation surrounding the batteries was

Description: reported to be stressed in 1996, but no sign of the batteries was found in 2000.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Buckets and cans were observed at the site.

Description:

Site Code: 1100-13 Classification: Rejected (5/9/2000)

Site Names: 1100-13, Gravel Pit #1, Pit 1 ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date:
Site Status: Active End Date:

Site The site is a pit where sand was excavated to be used for bedding and backfill material. The

Description: northern perimeter is marked with post and chain.

Site Code: 1100-14 Classification: Rejected (5/9/2000)

Site Names: 1100-14, Gravel Pit #2, Pit 2 **ReClassification:**

Site Type: Depression/Pit (nonspecific) Start Date: 1954

Site Status: Inactive End Date: 1985

Site The pit was a source of gravel for backfill material. It also was used as a dumping site for

Description: miscellaneous debris, paint and solvents.

Site Code: 1100-15 Classification: Rejected (5/9/2000)

Site Names: 1100-15, Gravel Pit #3, Pit 3 ReClassification:

Site Type: Depression/Pit (nonspecific) Start Date: 1979
Site Status: Inactive End Date: 1985

Site The site was used as a source of gravel for backfill material. It was also used as a disposal site for

Description: construction material (concrete rubble and roofing material. Occasionally antifreeze and degreaser

solutions from the 1171 building were disposed into the pit

Site Code: 1100-18 Classification: Rejected (5/9/2000)

Site Names: 1100-18, Cistern and Possible Historic **ReClassification:**

Disposal Site Identified During RCRA General Inspection 1100FY98 Item #3

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site appears to be a cistern. In the general area of the cistern is a homestead dump site.

Description: There appears to have been a well casing inside of the cistern. The casing is plugged

approximately 1.5 meters (5 feet) below the ground surface.

The cistern is in the middle of an old concrete pad and is lined with concrete (at least as much as is visible). The area between the sides of the cistern and the metal well casing is filled with large rocks and cobbles. Connected to this concrete pad, there appears to be another concrete-lined, rock-filled hole. The second hole is now very overgrown and is filled with large rocks and cobbles. It appears to have been rectangular and may have had a wooden cover. A snake was living under the remains of this wooden cover. North of the cistern are the remains of a wire mesh fence and an old household dump (cans primarily, some glass and ceramics). Further north, there is a smaller concrete structure. It is square and is now filled with dirt and vegetation. Overall, the site is mostly grass-covered, with some mature sagebrush and tumbleweeds. Debris is concentrated in the household dump, but there is some scattered debris across the site, including the metal frame of a coil mattress. The features mentioned thus far (with the exception of the small concrete structure) are south of an extensive ditch (irrigation?). Northeast of the cistern and north of the ditch, a cement pipe was found extending into the ditch. Just north of this feature, some of the cement pipe is exposed. This could considered a physical hazard. Southeast of the cistern are the remains of an old foundation. The cellar presents a physical hazard. Adjacent to the foundation is a small, thin area of coal, level with the ground surface.

Waste Type: Misc. Trash and Debris

Waste The waste consists of a cistern (with an interior well casing), several other concrete structures, a

Description: foundation, and miscellaneous debris (cans, glass, ceramics, an old mattress frame).

Site Code: 1100-20 Classification: Accepted

Site Names: 1100-20, Hammer 90-Day Storage Pad ReClassification: Rejected (9/14/2000)

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 2000

Site The storage pad was a "clamshell" unit that protected the waste from the elements and served as a

Description: secondary containment. The site is now inactive; all regulated waste was removed by February

15, 2000.

Waste Type: Chemicals

Waste The pad stored flammable paint waste.

Description:

Site Code: HRD Classification: Accepted

Site Names: HRD, Horn Rapids Disposal, ITT Waste ReClassification: Deleted From NPL (9/30/1996)

Disposal Landfill, Horn Rapid Landfill (HRL), Gravel Pit 4, Gravel Pit 5

Site Type:Sanitary LandfillStart Date:Site Status:InactiveEnd Date:

Site This site has been cleaned up based on the 1100 Area Record of Decision. This site consists of an

Description: inactive landfill that has been capped with clean soil (asbestos cap) and revegetated. A security

fence surrounds the site.

Waste Type: Chemicals

Waste During the remedial investigation of the site, a small amount of medical waste was discovered.

Description: It consisted of a milky white substance, an eye dropper bottle with clear liquid and another bottle

with clear liquid. A single plastic intravenous dispenser bag was also found. Because of the

unknown hazards associated with this waste, it was reburied in the landfill.

Waste Type: Asbestos (friable)

Waste Asbestos was found to be distributed throughout the landfill.

Description:

Waste Type: Misc. Trash and Debris

Waste Automotive debris was found in all areas of the landfill. Stainless steel lathe shavings were

Description: found in the central portion of the landfill. Miscellaneous trash including paint containers was

also found at the site.

Waste Type: Construction Debris

Waste Various types of construction debris were found at the site.

Description:

Waste Type: Oil

Waste Hydraulic oil contaminated with polychlorinated biphenyls was disposed at the site.

Description:

Site Code: UPR-1100-5 Classification: Accepted

Site Names: UPR-1100-5, UN-1100-5, 1171 Parking Lot ReClassification: Deleted From NPL (9/30/1996)

Site Type:Unplanned ReleaseStart Date:1962Site Status:InactiveEnd Date:1962

Site The site of the release was a transport truck in the 1171 Building parking lot.

Description:

Waste Type: Chemical Release

Waste The chemical release consisted of water in which metal specimens were immersed. One metal

Description: capsule ruptured contaminating the water with zirconium and plutonium oxides.

Site Code: UPR-1100-6 Classification: Accepted

Site Names: UPR-1100-6, Discolored Soil Site, UN- ReClassification: Deleted From NPL (9/30/1996)

1100-6

Site Type: Depression/Pit (nonspecific) Start Date:

Site Status: Inactive End Date: 1995

Site The site was a patch of oily, dark-stained soil within an elongated east-west oriented depression.

Description:

Waste Type: Abandoned Chemicals

Waste The site consists of dark-colored, oily residue, and soil. The material includes metal, organic, and pesticide contaminants. Bis(2-ethylhexyl)phthalate (BEHP) and chlordane were identified.

BEHP is a probable human carcinogen.

1100-EM-2

Site Code: 700 WST Classification: Accepted

Site Names: 700 WST, 700 Area Waste Solvent Tank, ReClassification: Deleted From NPL (9/30/1996)

700 Area Underground Waste Solvent

Tank, 703-1

Site Type: Storage Tank Start Date:

Site Status: Inactive End Date: 1989

Site Prior to removal, the site consisted of an underground steel storage tank. The tank was pulled and **Description:** examined. There was a thick crust of soil over much of the tank bottom that prevented a detailed

examined. There was a time crust of son over inden of the talk obtain that prevened a

observation of the tank. However, there were no obvious holes. The tank was empty.

Waste Type: Chemicals

Waste The unit contained combustible solution of aliphatic hydrocarbons with 162 parts per million of

Description: 1,1,1-trichloroethane.

Site Code: 700-1 Classification: Accepted

Site Names: 700-1, 747 Building 90-Day Waste **ReClassification:** Rejected (9/14/2000)

Accumulation Area

Site Type: Storage Pad (<90 day) Start Date:

Site Status: Inactive End Date: 1995

Site There is no longer a 90 Day Storage Area at the 747 Building; the part of the 747 Building that

Description: held the 90 Day pad is no longer in use.

Site Code: 1100 BSUHR Classification: Accepted

Site Names: 1100 BSUHR, 1100 Area Bus Shop ReClassification: Deleted From NPL (9/30/1996)

Underground Hoist Rams

Site Type: Storage Tank Start Date: 1953

Site Status: Inactive End Date:

Site This site was cleaned up under the 1100 Area Record of Decision. The 1100 BSUHR Site

Description: consists of four single manifold, triple tank hoists. Each is related to the 1171 Building

Maintenance activities.

Waste Type: Oil

Waste The units contain non-PCB hydraulic oil.

Description:

Site Code: 1100 HWSA Classification: Accepted

Site Names: 1100 HWSA, 1100 Area HWSA, 1100 ReClassification: Deleted From NPL (9/30/1996)

Area Hazardous Waste Storage Area

Site Type: Storage Pad (<90 day) Start Date: 1985

Site Status: Inactive End Date: 1990

Site The site consists of a fenced gravel pad that is used to store waste containers.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste The waste staged at the site included: used oil, antifreeze, degreasers, acids, and paint-related

Description: wastes.

Site Code: 1100 UOT4 Classification: Accepted

Site Names: 1100 UOT4, 1100 Area Used Oil Tank 4, ReClassification: Deleted From NPL (9/30/1996)

1100 Area Underground Used Oil Tank

(tank #4), 1171-4

Site Type:Storage TankStart Date:1953Site Status:InactiveEnd Date:1995

Site The 1100 UOT4 Site was an unlined, underground steel tank. The tank was removed.

Description:

Waste Type: Oil

Waste The unit received used oil designated for recycling.

Description:

Site Code: 1100 UOT5 Classification: Accepted

Site Names: 1100 UOT5, 1100 Area Used Oil Tank 5, ReClassification: Deleted From NPL (9/30/1996)

1100 Area Underground Used Oil Tank

(Tank #5), 1171-5

Site Type:Storage TankStart Date:1953Site Status:InactiveEnd Date:1994

Site The 1100 UOT5 Site was an unlined, underground steel tank. The tank was removed.

Description:

Waste Type: Oil

Waste The unit received used oil designated for recycling.

Description:

Site Code: 1100 UOT6 Classification: Accepted

Site Names: 1100 UOT6, 1100 Area Used Oil Tank 6, ReClassification: Deleted From NPL (9/30/1996)

1100 Area Underground Used Oil Tank

(Tank #6), 1171-6

Site Type:Storage TankStart Date:1953Site Status:InactiveEnd Date:1995

Site The 1100 UOT6 was a below grade, unlined steel tank. The tank has been removed.

Description:

Waste Type: Oil

Waste The unit received used oil designated for recycling.

Description:

Site Code: 1100 USPT2 Classification: Accepted

Site Names: 1100 USPT2, 1100 Area Underground ReClassification: Deleted From NPL (9/30/1996)

Steam Pad Tank 2, 1171-2

Site Type:Storage TankStart Date:1984Site Status:InactiveEnd Date:1995

Site The site was fiberglass-reinforced plastic tank. The tank was removed.

Description:

Waste Type: Chemicals

Waste The unit received oily water from bus washing activities.

Description:

Site Code: 1100 USPT3 Classification: Accepted

Site Names: 1100 USPT3, 1100 Area Underground ReClassification: Deleted From NPL (9/30/1996)

Steam Pad Tank 3, 1171-3

Site Type:Storage TankStart Date:1984Site Status:InactiveEnd Date:1995

Site The 110 USPT3 Site was a fiberglass-reinforced plastic tank. The tank has been removed.

Description:

Waste Type: Water

Waste The unit received oily water from washing heavy equipment.

Description:

Site Code: 1100-8 Classification: Accepted

Site Names: 1100-8, 1171 Hoist Oil Leak ReClassification: Deleted From NPL (9/30/1996)

Site Type:Unplanned ReleaseStart Date:Site Status:InactiveEnd Date:

Site The DB-1-N hoist in the 1171 building is currently used for vehicle maintenance. The hoist has

Description: been repaired and the oil that leaked from the hoist into the soil has been removed.

Waste Type: Oil

Waste Industrial Oil, UNOCAL UNAX AW 32, MSDS #12615 (HEHF)

Description: Reported Date: November 11, 1994

Site Code: 1100-19 Classification: Accepted

Site Names: 1100-19, Tar Flow and Stained Sands Areas ReClassification: Deleted From NPL (9/30/1996)

Site Type: Unplanned Release Start Date:

Site Status: Inactive End Date: 1995

Site Description:

This site has been remediated based on the 100 Area Record of Decision. Prior to remediation, the Tar Flow site contained soft, tar like material on the surface. The material appeared to have flowed approximately 45.75 meters (150 feet) to the northeast into a drainage ditch. The Stained Sand Area was located on the east slope of a sand dune. The area had vegetation and the sand appeared to be stained. After remediation, both sites were regraded to a smooth, uniform surface.

Waste Type: Soil

Waste

The waste consisted of petroleum contaminated soil.

Description:

1100-EM-3

Site Code: 3000 JYHWSA Classification: Accepted

Site Names: 3000 JYHWSA, 3000 Area Jones Yard ReClassification: Deleted From NPL (9/30/1996)

HWSA, 3000 Area Jones Yard Hazardous Waste Storage Area, Hazardous Waste

Storage Area (Jones Yard)

Site Type: Storage Pad (<90 day) Start Date: 1965

Site Status: Inactive End Date:

Site The site consisted of a hazardous waste storage area.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste A maximum of 200 55-gallon (208-liter) drums of nonregulated oils were stored in this area,

Description: along with 14 55-gallon (208-liter) drums of antifreeze and paint-reacted materials.

Site Code: 3000 UUOT Classification: Accepted

Site Names: 3000 UUOT, 3000 Area Underground ReClassification: Deleted From NPL (9/30/1996)

Used Oil Tank, 3000-12

Site Type:Storage TankStart Date:1983Site Status:InactiveEnd Date:1993

Site This was the site of a underground storage tank. The tank has been exhumed, and the site

Description: remediated.

Waste Type: Oil

Waste At the time the tank was exhumed, it contained some oil sludge.

Description:

Site Code: 3000/1208 HWSA Classification: Accepted

Site Names: 3000/1208 HWSA, 3000 Area 1208 ReClassification: Deleted From NPL (9/30/1996)

HWSA, 3000 Area 1208 Building

Hazardous Waste Storage Area, Hazardous

Waste Storage Area (1208)

Site Type:Storage Pad (<90 day)</th>Start Date:1967Site Status:InactiveEnd Date:1995

Site The site consists of a concrete pad that was used to store waste containers.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste Typical wastes contained in the staging area included paints and solvents. The unit received

Description: approximately 300 gallons (1,140 liters) per year.

Site Code: 3000/1226 HWSA Classification: Accepted

Site Names: 3000/1226 HWSA, 3000 Area 1226 ReClassification: Deleted From NPL (9/30/1996)

HWSA, 3000 Area 1226 Building

Hazardous Waste Storage Area, Hazardous

Waste Storage Area (1226)

Site Type:Storage Pad (<90 day)</th>Start Date:1954Site Status:InactiveEnd Date:1995

Site The site was a concrete pad that was used to store waste containers.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste Typical wastes contained in the staging area included oils, solvents, antifreeze, and degreasers in 55-gallon (208-liter) drums. The unit received approximately 300 gallons (1,140 liters) per year.

Site Code: 3000/1234 Classification: Accepted

Site Names: 3000/1234, 1234 Laydown Yard, 3000 ReClassification: Deleted From NPL (9/30/1996)

Area 1234 Storage Yard, 1234 Building

Storage Yard

Site Type: Storage Start Date:

Site Status: Inactive End Date: 1995

Site This site is an open area surrounded by a fence. Access was controlled by a single locked gate.

Description: This site was used for the storage of raw and structural materials. The Simulated High-Level Waste Treatment and Storage (SHLWST) sites were located within this site. The SHLWST was a

permitted Treatment, Storage, and Disposal (TSD) unit that was clean closed.

Waste Type: Equipment

Waste This area was used for storage of raw materials and equipment. Raw materials included grout

Description: used in the Simulated High-Level Waste Slurry Treatment/Storage.

Site Code: 3000/1240 HWSA Classification: Accepted

Site Names: 3000/1240 HWSA, 3000 Area 1240 ReClassification: Deleted From NPL (9/30/1996)

HWSA, 3000 Area 1240 Building

Hazardous Waste Storage Area, Hazardous

Waste Storage Area (1240)

Site Type:Storage Pad (<90 day)</th>Start Date:1951Site Status:InactiveEnd Date:1995

Site The site consisted of a concrete pad that was used to store waste containers. There were two

Description: drains in the storage pad that drained to the soil. The pad contained old stains.

Waste Type: Barrels/Drums/Buckets/Cans

Waste Typical wastes contained in the staging area include lubricating oils, cutting oils, solvents, and degreasers in 55-gallon (208-liters) drums. The unit receives approximately 200 gallons (760

degreasers in 55-gailon (208-liters) drums. The unit receives approximately 200 gailons (760

liters) per year.

Site Code: SHLWSTS Classification: Accepted

Site Names: SHLWSTS, Simulated High-Level Waste ReClassification: Closed Out (9/6/1995)

Slurry Treatment/Storage

Site Type:Process Unit/PlantStart Date:1987Site Status:InactiveEnd Date:1995

Site The site has been cleaned and turned over to the Port of Benton. This site was three roped off

Description: areas within the fenced-in 1234 Storage Yard. The site consisted of a treatment area, a storage

area, and a less than 90 day accumulation area.

Waste Type: Chemicals

Waste The slurry was dangerous waste containing toxic constituents and dissolved metals. The treated

Description: slurry was managed as non-radioactive solid waste.

Waste Type: Chemicals

Waste The 90-day pad stored waste from various Battelle research activities including the slurry

Description: treatment wastes.

Site Code: UPR-3000-1 Classification: Accepted

Site Names: UPR-3000-1, UN-3000-1, Release from the ReClassification: Deleted From NPL (9/30/1996)

Physical Science Laboratory

Site Type:Unplanned ReleaseStart Date:1973Site Status:InactiveEnd Date:1973

Site The release site was a sink used only for nonradioactive work in Room 1623 of the Physical

Description: Science Laboratory Building. A sign was installed by the sink and the whole middle island was

designated plainly as a cold region. The whole middle island was marked with floor tape and a

bench top tape to plainly segregate the area from the radioactive area.

Waste Type: Chemicals

Waste The waste consisted of a tracer solution containing 2 microcuries of cesium-134.

Description:

1100-IU-1

Site Code: 600-28 Classification: Accepted

Site Names: 600-28, Rattlesnake Construction Dump ReClassification: Deleted From NPL (9/30/1996)

Site Type:Dumping AreaStart Date:Site Status:InactiveEnd Date:

Site The site consists of numerous low piles of excavated soil, rock, and construction debris. This site

Description: has a very irregular slope. Sagebrush and other vegetation are growing on the piles.

Waste Type: Asbestos (non-friable)

Waste The waste consists of a small quantity of transite siding and asbestos pipe.

Description:

Waste Type: Barrels/Drums/Buckets/Cans

Waste The site contains numerous empty paint cans.

Description:

Site Code: 600-112 Classification: Accepted

Site Names: 600-112, 6652-C SSLAST, 6652-C SSL ReClassification: Deleted From NPL (9/30/1996)

Active Septic Tank, 6652-C Space Science

Laboratory Active Septic Tank

Site Type:Septic TankStart Date:1955Site Status:ActiveEnd Date:1994

Site The site consists of a concrete septic tank with two square access lids and a retention tank

Description: connected to the outlet of the septic tank. Both structures are underground. There is no visual

evidence of a second septic tank or a retention tank. There is a chained area marked with signs

stating "Caution, Sanitary Tile Field".

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater.

Description:

Site Code: 600-113 Classification: Accepted

Site Names: 600-113, 6652-C SSLIST, 6652-C SSL ReClassification: Deleted From NPL (9/30/1996)

Inactive Septic Tank, 6652-C Space Science Laboratory Inactive Septic Tank

Site Type:Septic TankStart Date:1955Site Status:InactiveEnd Date:1960

Site This site consists of a septic tank with two access covers and connecting, cobble covered

Description: drainfield. Both the septic tank and the drain field are located outside the Hanford Site boundary

barbed wire fence.

Waste Type: Sanitary Sewage

Waste The unit received sanitary sewage from U.S. Army facilities.

Description:

Site Code: 600-114 Classification: Accepted

Site Names: 600-114, 6652-G ALEFSBST, 6652-G ReClassification: Deleted From NPL (9/30/1996)

ALE Field Storage Building Septic Tank,

6607-14B

Site Type:Septic TankStart Date:1955Site Status:InactiveEnd Date:1960

Site This site consists of a septic tank with two round access lids, a concrete distribution box with a

Description: wooden lid, and the connecting tile field. The distribution box is located partly inside and partly

outside of the tile field chained boundary.

Waste Type: Sanitary Sewage

Waste The unit received sanitary sewage from U.S. Army facilities.

Description:

Site Code: 600-115 Classification: Accepted

Site Names: 600-115, 6652-I ALEHST, 6652-I ALE ReClassification: Deleted From NPL (9/30/1996)

Headquarters Septic Tank, 6652-I Arid Lands Ecology (ALE) Headquarters Septic

Tank, 6607-14

Site Type:Septic TankStart Date:1955Site Status:InactiveEnd Date:1996

Site This site consists of a septic tank with a round base and a 72 centimeter access lid, a distribution

Description: box covered with a wooden lid, a square diverter box, and the connecting drain field.

Waste Type: Sanitary Sewage

Waste The unit received sanitary wastewater.

Description:

Site Code: 600-116 Classification: Accepted

Site Names: 600-116, RMNMB, Rattlesnake Mountain ReClassification: Deleted From NPL (9/30/1996)

Nike Missile Base

Site Type:Military CompoundStart Date:1955Site Status:InactiveEnd Date:1961

Site This site consists of a former U. S. Army Nike Missile Base. The base is split into two parts: the

Description: radar site is on top of Rattlesnake Mountain and the missile launch area is at the foot of

Rattlesnake Mountain on the southeast slope. Some of these facilities were subsequently used by

Battelle Northwest.

Waste Type: Ordnance

Waste The site previously contained unexploded ordnance waste, according to DOE/RL-92-67.

Description:

Waste Type: Asbestos (friable)

The site contains PCB's from transformers, asbestos in insulation, tiles, and siding, mercury in Waste

switches, and lead-based paint and bricks in various buildings. **Description:**

Site Code: Accepted 600-270 Classification:

Site Names: 600-270, Horseshoe Landfill, Nike Missile **ReClassification:** Deleted From NPL (9/30/1996)

Base

Site Type: Dumping Area Start Date: 1950 **End Date:** 1970 **Site Status:** Inactive

Site The site is a former historical landfill. The site was part of a former Nike missile base consisting

of structures which supported missile launch, control, and maintenance functions, living quarters **Description:**

> for base personnel, and storage buildings for hazardous substances use in the maintenance of the facilities and missile operations.

Waste Type: Chemicals

Suspected wastes included solvents, fuels, acids, hydraulic fluid, and paints. Contaminants Waste sampled for were barium, chromium, lead, acetone, bis (2-ethylhexyl) phthalate, **Description:**

butylbenzylphthalate, diethylphthalate, di-n-butylphthalate, phenol, chlordane, DDT, DDE,

DDD, Endosulfan B, Endrin, Methyloxychlor, gasoline, diesel, heavy oils, diesel. Based on the results from soil excavated at A-6, the original 16 contaminants (draft ROD) were expanded to

include DDT, DDE, and DDD.

Waste Type: Demolition and Inert Waste

Waste The majority of the waste consisted of non-hazardous construction and demolition waste, scrap **Description:** metal and lumber, empty bottles, cans and drums. A summary of the waste found in each of the

6 anomalous areas is described below.

Horseshoe Landfill/A-1 - boulders were encountered at 1.2 meters (4 feet) below ground

surface, otherwise there was no evidence of any buried wastes or disturbed soil.

Horseshoe Landfill/A-2 - no evidence of any buried waste or disturbed soil was found.

Horseshoe Landfill/A-3 - abundant surface metal debris, barb wire, miscellaneous scrap metal,

miscellaneous building materials; no evidence of any buried wastes or disturbed soil.

Horseshoe Landfill/A-4 - bottles, rusted metal debris, car parts, car chassis, car engine with oil pan missing, 7-208 liter (7-55 gallon) drums ripped open and partially collapsed (empty) were

found.

Horseshoe Landfill/A-5 - bottles, pieces of rusted metal, a few animal bones were found. Horseshoe Landfill/A-6 - no evidence of buried wastes or disturbed soil in three excavations on the west side of A-6 except for copper grounding wire found about 15 centimeters (6 inches) below ground surface. Sheet metal scrap, fence post, wood debris, 0.61 meter (2 foot) diameter

washing machine washtub, abundant 2.54 centimeter (1 inch) diameter cable, cement blocks, bottles, metal scrap, 3 ripped and partially collapsed 208 liter (55 gallon) drums, car engine with

oil pan missing, wire, some plastic/metal parts, 4-25.4 centimeter (4 10 inch) battery-type containers with screens.

Site Code: 600-271 **Classification:** Accepted

Site Names: 600-271, Nike Missile Base Landfill **ReClassification:** Deleted From NPL (9/30/1996)

Site Type: **Dumping Area Start Date:** 1950 Site Status: Inactive End Date: 1970

Site The site is a former historical landfill. The site was part of a former Nike missile base consisting

Description: of structures which supported missile launch, control, and maintenance functions, living quarters

for base personnel, and storage buildings for hazardous substances use in the maintenance of the

facilities and missile operations.

Waste Type: Demolition and Inert Waste

Waste The majority of the waste consisted of non-hazardous construction and demolition waste, scrap

Description: metal, lumber, empty bottles, and cans.

Nike Missile Base Landfill/A1 - concrete blocks, bottles, wood, and metal debris.

Nike Missile Base Landfill/A2 - surface debris; long metal U-bolts, sheet metal scrap, miscellaneous scrap metal. There was no evidence of any buried waste or disturbed soil.

Nike Missile Base Landfill/A3 - There was no evidence of any buried waste or disturbed soil.

NONE

Site Code: 600-61 Classification: Rejected (Proposed)

Site Names: 600-61, White Bluffs Substation **ReClassification:**

Site Type: Electrical Substation Start Date: 1976

Site Status: Active End Date:

Site The substation consists of electrical equipment.

Description:

Waste Type: Oil

Waste Description:

The White Bluffs Substation uses petroleum oil, primarily mineral oil, as insulation in electrical equipment. Insulating oil is a highly refined, 10-weight petroleum oil with approximately 0.1 percent 2,6-di-tertbutyl-paracresol (an antioxidant known as BHT that is also used as a food additive) and varying amounts of polychlorinated biphenyls (PCBs) to increase dielectric strength. The aboveground tanks contain mineral oil which is used as make-up oil for equipment maintenance or cleaning.

Site Code: 600-235 Classification: Accepted

Site Names: 600-235, Lead Sheathed Telephone Cables **ReClassification:**

Site Type: Dumping Area Start Date: 1943

Site Status: Inactive End Date:

Site This site includes inactive lead-sheathed telephone cable that was abandoned as part of the **Description:** Integrated Voice Data Telephone System (IVDTS), which was installed in 1988 by U. S. West.

This system installed new telephone equipment in most buildings and installed new telephone switching facilities. In some cases the IVDTS reused portions of the old cables, but in most cases

the old cable was abandoned in place.

Waste Type: Equipment

Waste The lead in the cable is considered hazardous but not the cable itself.

Description:

Site Code: 600-261 Classification: Rejected (Proposed)

Site Names: 600-261, Standard Gauge Railroad Track, ReClassification:

601 Structures

Site Type: Foundation Start Date: 1943
Site Status: Inactive End Date: 1998

Site Status: Inactive End Date: 1998

Site The railroad system on the Hanford Site originally consisted of 123 miles of tracks, but sections have been removed or deeded to other agencies. The system owned by the Department of Energy

begins at the Horn Rapids road right-of-way. While most of the tracks are inactive, the part from

the Horn Rapids Road to Energy Northwest is still active.

When it was first built, the system began at the Richland Junction (Columbia Center) where it joined the Union Pacific commercial tracks and then ranged north to the abandoned Chicago, Milwaukee, St. Paul and Pacific tracks near the Vernita Bridge at the north boundary of the Site.

This site does not include any unplanned releases that may have occurred from railroad operations.